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Administrative Theory

by

Daniel E. Griffiths

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EDUCATIONAL DIVISION
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713-8

Library of Congress Card Number:

59-11995

PRINTED IN THE UNITED STATES OF AMERICA

390-38716-9

Preface

The study of administration is now in its most fruitful period to date, and this is particularly true in educational administration. Observers have commented that the content of educational administration has in the past been comprised of folklore, testimonials of reputedly successful administrations, and the speculations of college professors. Heretofore, it has been impossible to characterize the field of educational administration as being concerned with explanatory theory, with the creation of testable hypotheses, or with research-based conclusions. Changes in this diagnosis are still not general, but the prognosis is now good. With the advent of the Cooperative Program in Educational Administration (CPEA), sponsored by the Kellogg Foundation, there came new interests and new insights. The most productive of these was the interest in the development of explanatory theory. Whereas educational administration was once a laggard in the theoretical sense, it is now leading the way as all of education seeks a theoretical basis for its activities.

This is not the time to state a full-blown theory of administration. It is the time to write an interim statement setting forth the understandings we now have. Such is the purpose of this book. Chapter 1 is concerned with a statement of the present status of theory and contains a discussion of what theory is not. Chapter 2 sets forth a definition of theory and describes how theory can be built and for what it can be used. A review of eight different attempts to theorize in administration, in both educational and noneducational fields, is encompassed in Chapter 3. Chapter 4 includes the assumptions and concepts of a theory of administration developed around the decision-making process, and Chapter 5 contains a description of the process of decisioning in formal organizations.

This book should have some use in many areas of education. The discussion of theory in the first two chapters has meaning regardless of the field of inquiry in which the student is working.

The last three chapters are concerned specifically with administration, but they have many implications for those working in supervision.

Many of the ideas in this book can be traced back to conversations with Dr. Andrew W. Halpin, University of Utah, and to seminars and conferences at Columbia University made possible by Dr. Daniel R. Davies as Director of the Cooperative Center for Educational Administration. The theme of Chapter 1 was suggested by Dr. Hollis Moore, Jr., of the Committee for the Advancement of School Administration.

I wish also to acknowledge my indebtedness to Professor Robert Teviot Livingston, Columbia University, for many insights into the nature of administration. The research reported in Chapter 5 on the decision-making process was sponsored by a grant from the Esso Educational Foundation and was first presented in a paper for the Symposium on Sequential Decision-Making held at Arden House, June 1-2, 1957, under the directorship of Professor Livingston and the sponsorship of the Esso Educational Foundation. I am deeply grateful to Dr. Laurence Iannaccone for the opportunity to "talk through" with him the many sticky problems of theory construction. And finally, many thanks to Mary Emerick and Mrs. Gene Kratz for typing the manuscript.

D. E. G.

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Administrative Theory

1

The Theory Problem

"The man of affairs without science is like the physician who has fallen out of the anatomy and physiology he may have known; within limits he may be a shrewder and abler practitioner than an academic professor; but this he will be at the cost of being stationary . . . To principles, sooner or later, the subtlest craftsman has to bow his head; for, even while his hand is on his tools, by theory contingencies and complications are being detected and eliminated, and processes shortened and economized."[1]

RECENT DEVELOPMENTS IN EDUCATIONAL ADMINISTRATION

If any one statement could be made concerning educational administration at this time, it would be that as a field of study it is undergoing radical change. This is true not only in terms of different methods of teaching but, more significantly, in terms of content. Prior to 1950 the field was considered well defined, and there was little controversy concerning its content. The textbooks in general administration could be exemplified by that of Moehlman;[2] in fact, all others were once compared with it as a type of validating procedure. A short nine years later a much different situation confronts us. The field is no longer neatly defined. Recent textbooks in general administration, such as those of Hagman and Schwartz,[3] Griffiths,[4] Sargent and

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[1] T. C. Allbutt, *On Professional Education* (London, 1906).

[2] Arthur B. Moehlman, *School Administration* (Boston, Houghton Mifflin, 1940).

[3] Harlan L. Hagman and Alfred Schwartz, *Administration in Profile for School Executives* (New York, Harper, 1955).

[4] Daniel E. Griffiths, *Human Relations in School Administration* (New York, Appleton-Century-Crofts, 1956).

Belisle,[5] or the National Conference of Professors of Educational Administration,[6] bear little if any resemblance to Moehlman's. Present-day textbooks are characterized by a search for the *substance* of administration and for the *theory* which binds the substance together.

Even though a beginning has been made, nine years is much too short a time to change the thinking of the administrators of America's schools. Although the new direction is clear to many, Walton's critical statement still characterizes the field:[7]

> The subject matter of educational administration is not a thing of intellectual beauty. Borrowing fragments from several diverse disciplines—law, political science, social psychology, sociology, economics, business, education, engineering, architecture, and statistics—it lacks a well-defined, highly organized body of subject matter; it has no elegant and simple theoretical structure; and as literature it is singularly devoid of aesthetic qualities. In addition to the fragments appropriated from other disciplines, the content of the courses in administration has consisted of a description of practices, the cautious recommendation of promising techniques, personal success stories, and lively anecdotes, all surrounded with the aura of common sense, and often purveyed by a more or less successful administrator. However helpful this approach has been to the prospective administrator, it has not done much for the development of the subject.
>
> The mounting interest in the theoretical aspects of educational administration indicates a dissatisfaction with the traditional study of the subject and a desire to formulate a rubric of administrative doctrine, if not a scientific theory.

What are the factors which have caused a revolution in the field of educational administration?

Interest in theory, as construed in this book, is relatively recent in educational administration. The field has always been oriented to the "practical," to the exclusion of theory in a scientific sense. Since 1946 there have been several events which have been the building blocks upon which the present interest in theory is based. These events have ranged from the writings of a single individual to the formation of a national organization. Taken together, they constitute the ingredients which have revolutionized a whole field of human endeavor.

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[5] Cyril G. Sargent and Eugene L. Belisle, *Educational Administration: Cases and Concepts* (Boston, Houghton Mifflin, 1955).

[6] Roald F. Campbell and Russell T. Gregg, eds., *Administrative Behavior in Education* (New York, Harper, 1957).

[7] John Walton, "The Theoretical Study of Educational Administration," *Harvard Educational Review*, Vol. 25, No. 3 (Summer, 1955), p. 169.

Formation of NCPEA

It is fair to say that the handful of professors of educational administration who met at Endicott, New York, in 1947 to form the National Conference of Professors of Educational Administration did not realize that they were participating in the beginning of a movement of great significance. There, for the first time, the professors and a few practitioners came to know each other as persons. Prior to this meeting they had known each other only as writers or by reputation. Over the years the conference has grown in size and importance. Each year it has held a week-long meeting and examined a number of topics in depth. It has grown to be the conference at which pioneer thinking in administration is presented and tested.

Probably the most significant meeting of NCPEA was the one held at the University of Denver in August, 1954. A number of scholars from the social science fields of psychology, sociology, political science, social psychology, and others well versed in the theory of human behavior met with the professors of educational administration. These men did two things: first, they challenged the type of thinking which had been prevalent in educational administration, and, second, they offered many suggestions for new approaches to thinking in the field.

As a result, at least in part, of the expressed need for such a volume, Coladarci and Getzels wrote the provocative document, *The Use of Theory in Educational Administration.*[8] The volume marked the beginning of a devastatingly critical analysis of educational administration as a field of study.

At a subsequent meeting at the University of Connecticut, 1955, the membership was further challenged by Chancellor Furnas of The University of Buffalo. He stated that educational administration was characterized by emphasis upon the "form" of administration rather than the "substance."

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[8] Arthur P. Coladarci and Jacob W. Getzels, *The Use of Theory in Educational Administration* (Stanford, Stanford University Press, 1955).

Over the years the NCPEA has gone a full cycle. Its early publications synthesized what was known; its subsequent publications challenged these findings and suggested new directions in research; its last publication has again synthesized present knowledge.

The latest NCPEA publication, *Administrative Behavior in Education*, is a benchmark in the literature of educational administration.[9] This volume, in the words of the editors,[10]

> would synthesize and interpret research and experience dealing with the factors affecting administrative behavior. It was early agreed that the book should not only bring together what is now known, but also it should look to the future. There was a particular desire to place educational administration on a firmer professional footing by suggesting significant research directions and next steps in theory building. Finally, the implications of this total effort for the improvement of basic preparation programs for administrators, and programs for the continued professional development of administrators on-the-job, were to be drawn.

To a large degree these objectives were attained. The book reveals, however, an almost complete lack of theory oriented research in the field of administration, both educational and in the other adjectival varieties. This conclusion was reinforced for education by the publication of Moore's report on the research activities sponsored by the Cooperative Program in Educational Administration.[11] The report revealed a prolific effort which has been characterized by Halpin as "exhortations, how-to-do-it prescriptions, catalogues of opinion, or normative 'status' investigations which do not permit us to generalize beyond the immediate data."[12]

Kellogg Foundation and CPEA

The field of educational administration serves as a case study of how a great foundation exerts its influence. In the opinion of the author, at least, the influence has been all to the good. Beginning in 1946, the W. K. Kellogg Foundation of Battle Creek, Michigan, became vitally concerned with the administration of public schools. From that date to 1959, grants estimated at some nine million dollars were made, largely to universities, for the study and improvement of educational administration.[13] Prior to 1950, the date of the first substantial grants, and the innovation of the Cooperative Program in Educational Administration (CPEA), there was little interest in the substantive study of educational administration. Since that date there has been a rising tide of interest. The interest created, the funds and facilities provided, and the talent recruited have in the past few years moved the field farther along than it had moved in the preceding half-century. In large measure, the present urgency concerning theory can be traced to the stimulus given by the Kellogg Foundation.

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[9] Campbell and Gregg, eds., *op. cit.*

[10] *Ibid.*, Foreword.

[11] Hollis A. Moore, Jr., *Studies in School Administration* (Washington, American Association of School Administrators, 1957).

[12] Andrew W. Halpin, ed., *Administrative Theory in Education* (Chicago, Midwest Administration Center, 1958), p. 3.

Formation of the UCEA

The formation of the University Council for Educational Administration (UCEA) is another milestone in the development of the field. It has been organized to provide a means of interuniversity cooperation for improving the preparation of school administrators and for conducting a comprehensive program of educational research. Its organization was initially stimulated by a 1954 recommendation to the Kellogg Foundation by the Cooperative Program in Educational Administration, Middle Atlantic Region, requesting a grant to support the Council's formation. The grant was made, and, at the meeting of the National Conference of Professors of Educational Administration in August, 1955, representatives from some of the major institutions were queried as to their interest in the proposal. An open meeting of representatives from such institutions was then held in February, 1956, at the convention of the American Association of School Administrators, and a recommendation was made to proceed with plans for the organization of the Council. Thirty-two selected institutions met in November, 1956, to formulate goals and organizational plans which, with later revisions and expansions, provide the basic organizational framework of the University Council for Educational Administration.

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[13] For a detailed description of the CPEA see Moore, *op. cit.*

The most direct step toward the development of theory taken by UCEA was the cosponsorship with the University of Chicago of a seminar on theory. The seminar, attended by 51 professors from 31 universities, was appropriately entitled "Toward the Development of a Theory of Educational Administration." The procedure of the seminar illustrated what was probably the soundest approach to theory building at the time. Papers were read by men with varied academic backgrounds: psychology, sociology, education, business, and public administration. Following appropriate groupings of papers, the professors discussed the presentations, writers were questioned, and conclusions reached. The content of the seminar can be gleaned from examining the program:

The Development of Theory in Educational Administration—Andrew W. Halpin, University of Chicago

Problems in Developing a Theory of Educational Administration—James D. Thompson, University of Pittsburgh, Administrative Science Center

A Theory of Organizations—Talcott Parsons, Harvard University

A Theoretical Framework for the Study of Behavior in Organizations—Carroll L. Shartle, Personnel Research Board, Ohio State University

Administration as Problem-solving—John K. Hemphill, Educational Testing Service

Administration as Decision-Making—Daniel E. Griffiths, Teachers College, Columbia University

Administration as a Social Process—Jacob W. Getzels, University of Chicago

What Peculiarities in Educational Administration Make It a Special Case?—Roald F. Campbell, Midwest Administration Center, University of Chicago

These papers have all been published in the volume, *Administrative Theory in Education.*[14]

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[14] Halpin, *op. cit.*

Other Developments

Several other developments could be detailed to build the argument that change is now rapid in educational administration. One of the outstanding lacks in theoretical work has been the shortage of case material against which to try out theoretical concepts. This lack is being overcome. To date Sargent and Belisle,[15] Griffiths,[16] and Hamburg[17] have published case books. Others are in preparation. There has been a broadening of concepts in recent textbooks in the field as demonstrated by the works of Hagman and Schwartz, and Griffiths.[18] Research in the field is attracting considerable interest in journals outside of education as, for example, the review of three of the studies in Ohio State's School-Community Development Study in the *Administrative Science Quarterly.* [19] The quality of research is improving and the scope broadening. The Cooperative Research Program of the United States Office of Education is just now beginning to have an influential effect on educational administration.

The resurgence of interest in educational administration is focused upon the building of an adequate theory. Let us now turn our attention to an examination of this effort.

PRESENT NOTIONS OF ADMINISTRATIVE THEORY

Suppose that someone should say to you, "This is a very sound theoretical statement." How would you react? Would you feel reassured? Would you feel that this was a statement in which you could believe and in which you could place your trust? Would you feel it to be a *sound* statement? Or would your first reaction be one of disdain or distrust? Would you feel that because the statement was theoretically sound it must necessarily be impractical and, therefore, useless?

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[15] Sargent and Belisle, *op. cit.*

[16] Griffiths, *op. cit.*

[17] Morris Hamburg, *Case Studies in Elementary School Administration* (New York, Bureau of Publications, Teachers College, Columbia University, 1957).

[18] Hagman and Schwartz, *op. cit.*, and Griffiths, *op. cit.*

[19] *Administrative Science Quarterly*, Vol. 2, No. 3 (December, 1957), pp. 381-387.

The latter point of view, that theory is useless, appears to be the one most prevalent in the field of educational administration at the present time. This is true not only among practitioners in the field, but also among many professors of educational administration. This antitheoretical bias permeates the literature of the field, the agenda of professional conventions, and the conversation and thoughts of those engaged in the pursuit of the subject. School administrators appear not at all interested in theoretical considerations and give attention only to that which is practical. This is true, to a large extent, of the professors as well. The author well remembers a conversation with a professor at a leading school of education. The subject of the discussion was a course entitled "Principles of School Administration." The professor was quick to point out that this was a "practical course, none of that theory stuff." A perusal of the syllabus failed to reveal any "principles," and from that point of view there was certainly no theory in the course!

Explaining the Antitheoretical Bias

In an extremely insightful and significant but, unfortunately, little-read monograph, Coladarci and Getzels apply themselves to the topic under discussion.[20] They raise the question of why educational administration as a professional field is so adverse to theory. Their conclusions are interesting and warrant close examination here. In speaking of the habits or beliefs which precluded intelligent consideration of theory on the part of educational administrators, they state:[21]

> Among the most apparent of these are (1) a commitment to "factualism," (2) an unwarranted respect for the authority of "experts" and "laws," (3) a fear of theorizing, (4) an inadequate professional language, and (5) a frequent tendency to become emotionally identified with one's own views.

To these five should be added a sixth. This is the lack of understanding of what theory is. It must be stated that the above habits of behavior toward administration are not the exclusive domain of educators. The other areas of administration and, in fact, the whole American people appear to be afflicted to some extent. This is certainly apparent among practitioners in the general field of education who operate largely without regard to theory.

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[20] Coladarci and Getzels, *op. cit.*

[21] *Ibid.*, p. 10.

Factualism. There is the widespread belief that all that is necessary to improve administration is to collect facts. "Get the facts" is, indeed, almost a national slogan. That the facts have no interrelatedness seems not to concern those so afflicted. Coladarci and Getzels point out the dangers involved in this procedure:[22]

> This has tended, historically, to direct education more and more toward the status of a purely empirical discipline without theoretical vehicles to carry the empirical observations and relationships. As a consequence of the resulting tendency to raise inquiries that provide knowledge merely of the order of particular propositions or empirical generalizations (e.g., "high staff morale is associated with accurate interpersonal perceptions"), some critics have been prompted to remind us that an educational science cannot be merely an encyclopedia of facts.

Authority. There is an alarming amount of respect for the authority of persons or principles in the field of educational administration. One need only to point to the widespread use of the "jury" technique in research to use as validating criteria the "opinions of experts in the field." As another example, one should look to the conventions and conferences of school administrators. The report of a genuine research study on administration at such a meeting is a rarity and even when presented is greeted with skepticism. One such occasion dealt with a review of the research on pupil promotion. After listening to a recounting of the research, one principal excitedly asked, "Say, do you believe this, or is it just research?" Another case was that of a professor of educational administration who was engaged in a discussion of a practice commonly advocated. His defense of the position he had taken was, "Why it's one of __________'s principles!"

The reporting of a practice by an administrator is generally accorded high respect, particularly if the administrator comes from: (1) a large city, (2) a wealthy community, or (3) if he has made numerous similar reports before. While a certain amount of reporting of practice is useful, the saturation point is reached quickly. One finds that the "authorities" commonly contradict one another; and, when reports of practicing administrators are investigated, it is not unusual to find the event differs from the report.

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[22] *Ibid.*, p. 10.

An overdose of respect for the authority of "experts" and "laws" is the opposite of a sincere respect for theory. A theoretical approach is based upon the testing of carefully formulated hypotheses. Action on the word of authority is untested and blind.

Fear of theory. Coladarci and Getzels point out that this is expressed as "theory is too difficult," or "theory is impractical," or "theories are not stable."[23]

Little credence should be given to the notion that theory is too difficult. The truth is that administrators are not practiced in its use; so it seems to be difficult. The administrator should have more contact with theory during his period of preparation. He could then deal with theory with less fear.

Is theory really impractical? In considering this point we might start with Dewey's contention that:[24]

> theory is in the end . . . the most practical of all things, because the widening of the range of attention beyond merely purpose and desire eventually results in the creation of wider and farther-reaching purposes and enables us to make use of a much wider and deeper range of conditions and means than were expressed in the observation of primitive practical purposes.

Rather than theory's being impractical, it is suggested that theory is most practical! The practicality comes from the ability one gains from the knowledge of theory which enables one to act in specific situations because he knows the generality of situations. Thus, if one were to advocate the use of lay committees in a school system, one would feel more secure if this decision were based on a knowledge of interaction theory on the part of the superintendent rather than being adopted simply because a district "across the river" used it. The former puts the practice in its broader framework; the latter puts it in its narrow context. Mort and Ross point up the practicality of good theory very clearly:[25]

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[23] *Ibid.*, p. 12.

[24] John Dewey, *Sources of a Science of Education* (New York, Liveright, 1929), p. 17.

> Theory, in the minds of the authors, is the best and most accurate mental picture of how an organism works, taking into consideration and reconciling all pertinent known facts and phenomena. There is nothing impractical about good theory. If the theory is a close approximation of truth, the acts which it suggests will be generally wise ones. If it is bad theory (not close to the truth) acted upon, the chances are that there will be many acts of futility . . . Action divorced from theory is the random scurrying of a rat in a new maze. Good theory is the power to find the way to the goal with a minimum of lost motion and electric shocks.

The instability of theory has caused many to suspect the whole notion of theory, yet this is not a necessary deterrent. Theories are not built for eternity. Theories are developed to help in the identification and clarification of problems here and now and in the immediate future. They are also constructed so that better theories might be built in the future. Theory building might be construed as a pyramiding task. Present theories rest on those of the past. When one examines past theories, even in the physical sciences, one notes the theories which were demonstrated to be untrue.

Ptolemy's theory of the universe was held as true for 14 centuries. This theory held that the earth was the center of the universe. It was not until 1543 that Copernicus published the framework for the present theory of the universe. Can it be said that Ptolemy's work was useless? Hardly. Indeed it could be argued that Copernicus would never have formulated the heliocentric theory had there not been discovered inadequacies in the Ptolemaic theory. The "incorrect" theory served its purpose in focusing attention on the essential problems and in offering solutions which could be tested. The same sequence of events could be illustrated many times over with examples from the sciences. Thus there is no reason to fear theory because of its transitory nature.

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[25] Paul R. Mort and Donald H. Ross, *Principles of School Administration* (New York, McGraw-Hill, 1957), p. 4.

Inadequate professional language. One of the salutary effects of the present interest in theory is the stress placed on the development of the language of educational administration. It must be pointed out that educational administration is not alone in being weak with regard to language; but the field is badly in need of strengthening in this area. Theory cannot be developed in a field which does not have clear unequivocal concepts. Two facts as regards the professional language of educational administration are obvious: (1) there is no consistency in the use of terms to describe common events; (2) the same words (democracy, authority, integration, etc.) are used to describe a wide variety of events or acts.

This variation and lack of consistency in the use of words make it difficult, if not impossible, for writers to communicate with one another. A word can be thought of as a map of a territory. We have the task before us of determining what words go with what maps and then consistently using the same words and maps all of the time. Concept construction is a major task toward which we must bend every effort in the years ahead.

Emotional identification with personal views. One of the major drawbacks to progress in the field of educational administration has been the lack of theory detached from personal emotion. At present we have a multitude of ideas held by a large number of individuals. The ideas are personalized, and to criticize an idea is to criticize an individual. To criticize a person seldom brings out the constructive aspects of the problem. The person responds by getting defensive, striking back, getting angry. None of these reactions result in improved theory. They result in a series of internecine wars which sap the energies of those who, under happier conditions, could be productive.

Our aim should be to develop objective approaches to theory in order that the content of the theory may be criticized without impugning the veracity of the author. When this point is reached we will be able to focus the creative intelligence of the profession on the problem of theory building and, in so doing, develop a satisfactory theory.

Lack of understanding of theory. Back of the lack of confidence in theory on the part of educational administrators is, in all probability, the basic pattern of belief of the American people. No one segment of a culture is apt to get far out of step with the remainder of the culture, and administrators are least apt of all to get out of step. The American people have been characterized as essentially "practical." We have just emerged from a period in which the egghead was reviled, the intellectual damned. During this period a caricature picture of the American attitude toward theory was drawn by daily events —as when Congress appropriated almost as much money to support the price of cheese as it appropriated for ballistic research, and when Secretary of Defense Wilson epitomized pure research as that done by those who don't know what they are doing.

In this atmosphere there is little wonder that theory has not thrived. That this atmosphere is beginning to change is clear. A recent article by Brogan points out the necessity for such a change, and some of the reforms called for are now becoming apparent.[26] Brogan emphasizes the need for a broader view of things in all aspects of living. He demonstrates the shortcomings of American scientific theory, showing that we have produced "devices," not "inventions." Brogan points up the reliance of Americans on leaders from business and the military who act in terms of stereotypes rather than against a broad theoretical background. When educational administrators are criticized, it must be remembered that they are part of a culture which has a strong antitheoretical bias.

WHAT THEORY IS NOT

One method of definition is to make perfectly clear what a thing is *not*. Such a task is attempted in this section. Regardless of what theory is, it is definitely not many of the things which are attributed to it. We can say with little equivocation that theory is not: (*a*) a personal affair, (*b*) a dream, (*c*) a philosophy, or (*d*) a taxonomy.

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[26] D. W. Brogan, "The End of Illusion," *Yale Review*, Vol. XLVII, No. 2 (December, 1957), pp. 161-174.

Not Personal

It is apparently believed by many that theory is a rather personal matter—that each person works out for himself a theory of administration. It is true that each administrator does develop a style or pattern of operation, but this cannot be called a theory. It is, most likely, a set of rules of thumb which have evolved out of the experiences of the administrator. Because the experience of the administrator is of necessity limited, the rules of thumb do not have the breadth, the depth, or the logical deducibility necessary to constitute theory. Although each administrator will form an opinion as to what will work as he faces the numerous problems of each day, the administrator should not delude himself into thinking that he has developed a theory.

Not a Dream

Little space should be devoted to this misconception. This is the belief of those most skeptical of theory. They label any flight of fancy, any daydream, as theory. It is also now fashionable in some quarters to label bull sessions as "theoretical." With this basic attitude, no wonder some have such a low opinion of the value of theory. Theory can never be construed as even remotely related to the above terms.

Not a Philosophy

One of the exercises in education courses is to have each student develop for himself a "philosophy of education." By this exercise the student develops for himself a set of "oughts." He sets down the position he ought to take on numerous educational problems. This set of directions as to what an administrator ought to do in particular situations is what many people call theory. As this is the most commonly held point of view as regards theory of administration, considerable space is here devoted to its discussion.

First of all, let it be stated that the term *philosophy* was used rather loosely in the above paragraph. If a student were really to develop a philosophy, he would need to do much more than develop a set of "oughts" or values. As Butler states, he would need to deal with the three great problems of philosophy:[27]

> (1) The problem of reality is this: What is the nature of the universe in which we live? Or, in the last analysis, what is real? The branch of philosophy which deals with this great problem is called *metaphysics.*
>
> (2) The problem of knowledge is this: How does a man know what is real? That is to say, how do we come by our knowledge and how can we be sure it is true, not error or illusion? The area of philosophy which is devoted to solving this problem is named *epistemology.*
>
> (3) The third great problem, the problem of value is this: What are the important values which are to be desired in living? Are there values rooted in reality? And how can they be realized in our experience? The branch of philosophy dealing with such questions as these is named *axiology.* In addition to these three, but most closely related to *epistemology,* is another branch of philosophy which deals with the exact relating of ideas. This area of philosophy is commonly referred to as the science of *logic.*

It can be seen easily that when one develops a set of values he necessarily involves the other areas of philosophy. A well-developed set of values, having logical consistency and related to reality, is of crucial importance to administrators.[28] As imperative as is a sound philosophy, theory is something else again. Just how does philosophy differ from theory? This is commonly discussed as the "is-ought" dichotomy.

Halpin has been very critical of practice in educational administration and states on this point:[29]

> some writers have used this term (theory) in the sense of "value theory," to refer not to how administrators *do* behave, but to how they *ought* to behave. This confoundment between the "is's" and the "ought's" of behavior is responsible for a greater failure in communication between educators and social scientists than any other issue. No one will deny that we need normative standards—in the ethical meaning of the term—for how administrators *ought* to behave, but these prescriptions do not constitute a theory.

[27] J. Donald Butler, *Four Philosophies* (New York, Harper, 1957), p. 15.

[28] For a discussion of this point see Orin B. Graff and Calvin M. Street, "Developing a Value Framework for Educational Administration," in Campbell and Gregg, eds., *op. cit.*, pp. 120-152.

[29] Halpin, *op. cit.*, p. 6.

This dichotomy of "is" and "ought" has been discussed by several other writers in the same vein, including Waldo[30] and Simon.[31] This point might be clarified by reference to the physical sciences. If a person jumped out of a window in the 30th story of a building, we could predict the exact speed at which his body would hit the sidewalk below. We could also calculate the force of the impact when the body hit and could predict with a high degree of probability that the person would die upon hitting the sidewalk. All this is in the realm of theory. We can say, "If a person leaps from the 30th story of a building, he will die." There is no implication of "oughtness" in this statement. There are no values in the statement. Values can be put in as variables, however. A person might raise the question, "Do I want to die?" If his answer is yes (a value judgment), then he might consider the efficiency of leaping from a 30th story window. Theory tells him this would be very effective.

On a different level Simon uses this crystal clear illustration:[32]

> In the realm of economics, the proposition "Alternative A is good" may be translated in two propositions, one of them ethical, the other factual:
>
> "Alternative A will lead to maximum profit."
>
> "To maximize profit is good."
>
> The first of these sentences has no ethical content and is a sentence of the practical science of business. The second sentence is an ethical imperative and has no place in any science.
>
> Science cannot tell whether we *ought* to maximize profit. It can merely tell us under what conditions this maximum profit will occur, and what the consequences of maximization will be.

The development of the line of reasoning in both examples above has its origin in logical positivism, which makes a sharp distinction between questions of fact ("is" questions) and questions of value ("ought" questions). The major differences between these two types of questions is that one can be verified empirically whereas the other cannot. Propositions of fact can, at least in principle, be verified, but propositions of value are in the realm of preference and cannot be verified empirically.[33]

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[30] Dwight Waldo, "Administrative Theory in the United States: A Survey and Prospect," *Political Studies*, Vol. 2, No. 1 (February, 1954), p. 79.

[31] Herbert A. Simon, *Administrative Behavior* (New York, Macmillan, 1950), pp. 249, 250.

[32] *Ibid.*, pp. 249-250.

The logical positivist position that the data of man's social life lend themselves to scientific study in the same manner as do those of physics or biology, so long as we are careful not to confuse the "is" and the "ought," has received strong support in the literature of administration.[34] Thompson summarizes this whole argument with a cogent statement as to the place of values in administrative theory:[35]

> *The values capable of being attached to education and to administration will not be incorporated into the theoretical system itself; rather the system will treat such values as variables.* The values of "democracy" undoubtedly color both "education" and "administration" in 20th Century America. But if we sincerely want to understand educational (or any other type of) administration, we must not attempt to build a theory of democratic administration in education. Instead, our theory must account for administrative behavior and processes both in cases where democracy is highly valued *and* where other political ideals are highly valued. Similarly, we cannot afford a separate theory of profit-oriented administration, although our general theory must be capable of explaining administration where profit is an important concern. Values must be treated as variables, for purposes of theory, rather than as limits to the theory.

Not a Taxonomy

A taxonomy is a classification of data according to their natural relationships, or the principles governing such classifications. Taxonomies have served useful purposes in practically all of the sciences. In fact, one could probably make a very good argument to support the contention that any science begins with a taxonomy. Possibly the most widely known administrative taxonomy is POSDCORB which, when developed, was thought to be the ultimate in administrative thought.[36] In educational administration several taxonomies have been advanced, some as taxonomies and some as theories. Among these have been the Tri-Dimensional Concept,[37] the Competency Pattern,[38] and the School-Community Development Study.[39]

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[33] For a discussion of the pro's and con's of logical positivism and its influence on public administration see Dwight Waldo, *The Study of Public Administration* (Garden City, N. Y., Doubleday, 1955) pp. 43-45, 60-66.

[34] For discussions of this point see Simon, *op. cit.*, Halpin, *op. cit.*, and James D. Thompson, "Modern Approaches to Theory in Administration," in Halpin, ed., *op. cit.*

[35] Thompson, *op. cit.*, 31.

It should be stressed that these taxonomical approaches are valuable, but in a limited way. The Tri-Dimensional Concept, for instance, offers a convenient classification system for a division of the functions of administration. Functions can be divided into four categories: (1) educational opportunity, (2) funds and facilities, (3) personnel, and (4) community relationships. Each category can be subdivided in regard to the variety of skill, as defined by Katz,[40] needed to perform each function: (1) technical, (2) human, and (3) conceptual. This taxonomy has been most helpful in preparing job descriptions for various administrative positions and for dividing administration into manageable units.

The drawbacks to building theory from a taxonomic base quickly become apparent to anyone who has attempted this task. Once an individual completes his taxonomy, the question is "Where do we go from here?" and the answer is "Nowhere." This is true because taxonomy does not allow one to develop *testable hypotheses* which are, of course, the foundation of any theory. Even if you put two taxonomies together, as in the above paragraph, hypotheses do not result from the mating. All that does result is a more detailed classification system.

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[36] Luther Gulick, "Notes on the Theory of Organization," in Luther Gulick and Lyndall Urwick, eds., *Papers on the Science of Administration* (New York, Institute of Public Administration, 1937), pp. 3-45. POSDCORB is a made-up word designed by Gulick to call attention to the various functional elements of the work of the chief executive. It is made up of the initials of the following: planning, organizing, staffing, directing, co-ordinating, reporting, and budgeting.

[37] Devised by Robert Teviot Livingston and Daniel R. Davies, described and modified by Griffiths, *op. cit.*, pp. 4-12.

[38] Southern States Cooperative Program in Educational Administration, *Better Teaching in School Administration* (Nashville, Tenn., George Peabody College, 1955).

[39] John A. Ramseyer and others, *Factors Affecting Educational Administration*, SCDSMS No. 2 (Columbus, O., Ohio State University Press, 1955).

[40] Robert L. Katz, "Skills of an Effective Administrator," *Harvard Business Review*, Vol. 33, No. 1 (January-February, 1955), pp. 33-42.

Halpin has pointed out two other "snares" in the taxonomic method.[41] The first is that the only limit to the number of classifications is our vocabulary. The second is that in using taxonomies we run the risk of mixing oranges and battleships. It is easy to categorize things which are not coordinate simply because they are alike in certain superficial characteristics.

Because science provides many examples of the fruitful use of classification systems one may reasonably raise the question, "What is the proper use of taxonomic systems?" The answer is very simple. Taxonomies are useful when they are the *result* of a theoretical formulation. An illustration is the *Periodic Table of the Elements.* The Table resulted from the formulation of the Periodic Law by Mendeleyev. The Periodic Law was a theoretical formulation of the relationships which exist among the elements. Through the use of the formulation it was possible to predict the properties of undiscovered elements. It can be said, then, that a taxonomy is useful if it results from a well-drawn theoretical formulation.

SUMMARY

The study of administration is in the process of drastic change. Educational administration has not withstood this movement and, in fact, may now be considered to be a leader among the adjectival subdivisions in the change. The change has been stimulated by highly critical publications; by a new, a very active professional organization, the National Conference of Professors of Educational Administration; by the timely grants of the Kellogg Foundation which resulted in the Cooperative Program in Educational Administration; and finally by the formation of the University Council for Educational Administration.

At present there still exists a strong antitheoretical bias toward theory in educational administration, as well as in other types of administration. This bias can be accounted for by a number of habits or beliefs including: a commitment to "factualism," an unwarranted respect for the authority of "experts" and "laws," a fear of theorizing, an inadequate professional language, a frequent tendency to become emotionally identified with one's own views, and a lack of understanding of what theory really is.

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[41] Halpin, *op. cit.*, pp. 7, 8.

One method of definition is to state what a term is not. It is demonstrated that theory is not: a personal affair, a dream, a philosophy, or a taxonomy.

2

The Nature of Theory

The whole movement toward the development of an adequate theory of administration is actually a movement toward a more scientific approach to administration. In this chapter we examine the relationship between science and administration, the requirements of a theory of administration, a definition of theory, and the process of building a theory including concept development and model construction.

SCIENCE AND ADMINISTRATION

To the student in pursuit of a theory of administration there is no issue as to whether administration is an art or a science. He is convinced that administration has at least some of the aspects of science. The term *art* is used to designate practice guided by intuition and experience rather than by the direct application of scientific findings. It is true, at the present time, that no one could administer in a thoroughly scientific manner; and, indeed, it may be that no one will ever be able to administer in this way. On the other hand, one should be able to do better than operate solely on the level of art.

The question for the theorist is, "To what extent is the content of administration susceptible to scientific treatment?" To answer this question we must consider the characteristics of a science and how they relate to administration.

Characteristics of a Science

A large literature has been accumulated on the subject of *science*. We will not try to survey that literature here; however, the works reported here were chosen in the belief that they represent fairly the literature of the field of science.[1]

It is the aim of science to accomplish three things concerning its subject matter: description, explanation, and prediction. These are arranged both in order of importance and chronology. In administration, we have deviated from this order and have attempted to explain without describing. The fact that we have had little more success in prediction than would any common-sense approach is evidence to demonstrate that we need more careful description. The study of administration can become scientific to the extent that it ascertains its *facts* by a meticulous scrutiny of administrative behavior. This must then be followed by causal interpretation of the facts. On the basis of description and interpretation, accurate predictions can be made. All this means that scientific inquiry is regulated by certain criteria which are examined below.

Objectivity. The subject matter of a science must not only be free from personal bias or prejudice; it must also be capable of being tested by any intelligent person who has the technical equipment to make the necessary observations. Much of what is discussed in administrative literature then falls outside the scope of scientific inquiry. Those intuitions, hunches, and feelings which cannot be tested are *not* the subject matter of a scientific study of administration. This is not to say that they are not important; it is to say that they are not scientific.

Reliability. The second criterion of scientific knowledge is concerned with the degree to which a bit of knowledge can be verified by confirmation from others working on the same problem. Probably the surest way to distinguish between *opinion* and *knowledge* (well-substantiated belief) is in terms of the degree to which the same conclusion is arrived at by numerous investigators using the same data in the same manner. In educational administration we have generally not subjected our findings to the test of reliability. As a consequence we have published endless lists of *principles* which are actually little more than lists of unverified *opinion*. As an example, one standard text on educational administration lists some 35 "principles" for the construction of a salary schedule—a greater number of principles than is to be found in a standard physics textbook!

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[1] The basic reference for this section is Herbert Feigl and May Brodbeck, eds., *Readings in the Philosophy of Science* (New York, Appleton-Century-Crofts, 1953), pp. 8-18.

Operational definitions. The concepts which are used in a science must be defined by a series of operations which permit the perception and identification of the phenomena referred to by the concepts. This will be discussed in some detail later in this chapter. Suffice it to say here that a major task of the administrative theorist is to define the concepts he is to use in terms of the operations by which he attains his data.

Coherence or systematic structure. "This is what T. H. Huxley had in mind when he defined science as 'organized common sense.' Not a mere collection of miscellaneous items of information, but a well-connected account of the facts is what we seek in science. On the descriptive level this results, for example, in systems of classification or division, in diagrams, statistical charts, and the like. On the explanatory levels of science sets of laws or theoretical assumptions are utilized. Explanation in science consists in the hypothetico-deductive procedure. The laws, theories, or hypotheses form the premises from which we derive logically, or logico-mathematically, the observed or observable facts. These facts, often belonging to heterogeneous domains, thus become integrated into a coherent, unifying structure."[2]

Comprehensiveness. Scientific knowledge differs from common-sense knowledge in the magnitude of its scope. In the physical sciences, knowledge is acquired beyond the reach of our unaided senses by the use of gadgets such as Geiger counters and telescopes. Another major difference, and one of great consequence to us in the social sciences, is the scientific use of abstract concepts. A great range of concrete events can be handled through the use of a limited number of abstract concepts. The abstract concepts enable us to generalize and thus widely extend the range of knowledge which we possess. A warning is necessary here: the unifying concepts should always be kept open in order that they may be revised when new knowledge is acquired.

It is abundantly clear that the content of administration *is* capable of being handled in a scientific manner. If the content of administration should ever be handled in the scientific manner described above, the reliance upon art would diminish proportionately and administration would move forward.

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[2] *Ibid.*, p. 13.

Administration—An Applied Science

The administrator is an applier of science in much the same sense as is an engineer or doctor. There will always be some art in administration, as there is in engineering or medicine; but the amount of art will decrease as the amount of available scientific information replaces administrative folklore. It is true that the present-day doctor is far superior to the 19th century physician, but only because the amount of scientific knowledge available to him is so much greater, not because he is a superior artist.

The practicing administrator should be able to use theory in much the same way as a practicing doctor is able to use the theory developed by researchers in biological laboratories. The doctor does not need to know the theory of mold growth to be able to use penicillin in curing a streptococcus infection; yet he would be a very poor doctor if he did not use the penicillin. In like manner, the educational administrator should be able to look to administrative theory for guidance, for instance, in solving a problem of faculty human relations.

What is being suggested is that the practice of administration is the application of the theory of administrative researchers. This means that the hypotheses to be tested must, in large part, be suggested by practitioners in the field. We who presume to formulate theory must be certain that what we formulate has relevance to the problems which are recognized by those who practice administration.

CRITERIA FOR A THEORY OF ADMINISTRATION

A theory of administration must, of course, conform to the criteria of science discussed above. In addition, there are certain criteria applicable to a theory of administration. Because administration is an applied science, the criteria suggested are related to the *use* of theory in administration. These criteria help us to answer the question, "Of what use is theory to administrators?" It will be noted that these criteria are related to some of the criteria for science mentioned above. Certainly the two sets are not mutually exclusive.

Theory as a Guide to Action

Unless a theory can provide guidance for the administrator when he needs to act, it is a poor theory indeed. The help which an administrator gets from theory is not in terms of what he "ought" to do. Guidance in this area comes from his value system. The help he gets from theory is in terms of what will happen if he does a certain thing. In other words, theory deals with the *consequences* of action. "*If* the administrator does this, *then* this will happen," is, in brief, theory in action. (Note the use of the "if-then" construction.)

Thompson has stated another use of theory in terms of a guide to action:[3]

> An adequate theory would also prepare students for further growth through their own later experiences by providing them with economical ways of ordering that experience. By emphasizing the interrelatedness of phenomena, such a theory would help them remain alert to the unanticipated consequences of their actions; it would help them avoid oversimplified explanations of those actions which were successful; and it would caution them to be aware of changing conditions which might call for changed behavior patterns.

In addition to the *anticipated* consequences mentioned above, theory also makes administrators aware of the *unanticipated* consequences of their actions. Theory does this by directing attention to processes and relationships rather than techniques. Techniques are dead-end approaches, but processes and relationships enable an administrator to expand and broaden his conceptual framework as new knowledge accumulates.

Theory as a Guide to the Collection of Facts

Facts are certainly basic to theory building. Yet whenever we start to look for facts, Cohen's admonition seems so appropriate.

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[3] James D. Thompson, "Modern Approaches to Theory in Administration," in Andrew W. Halpin, ed., *Administrative Theory in Education* (Chicago, Midwest Administration Center, 1958), p. 24.

"Begin by collecting facts? Aye, but what facts?"[4] What facts indeed? Without some reference point, facts could be gathered *ad infinitum,* and we would be no nearer a solution to our problems than before we started.

Facts, to be of value, must bear a relationship to one another. The use of theory in the gathering of facts provides this relationship. This works in at least two ways. First, in the process of building original theory, facts are sought which bear upon the concepts which one has devised. Second, once a theory has been written, facts are sought which are either suggested by the theory or are needed to validate the theory. But over and above the search for new facts is the concept that theory gives meaning to the facts which are uncovered. As Dallenbach has said:[5]

> Doing something, without a theory, is not a scientific experiment. It is mere busy work. It contributes nothing to knowledge; it has no scientific purpose or meaning. We thus escape the necessity, when such a report appears in print to clutter up our scientific literature, of taking it into account for, "if there is no meaning," as the king said to Alice in Wonderland, "that saves a world of trouble, you know, as we needn't try to find any."

Theory as a Guide to New Knowledge

One of the most useful results obtained from theory has been the new knowledge which has been suggested and often found. While the most startling and dramatic findings have been in the field of nuclear physics and astronomy, this generalization holds true in administration as well. If the theory merely describes that which is known, it is, indeed, a poor theory.

The most striking example of how good theory leads to new knowledge is the discovery of the planet Neptune. This planet is so far from the earth that it cannot be seen with the naked eye. In observing the path of the planet Uranus it was noticed that the planet had a periodic irregularity in its motion. Because its laws of motion had been determined and validated, any irregularity must have been caused by the presence of a foreign body of considerable size. With this theoretical deduction, astronomers were able to find the planet Neptune. When we have developed administrative theory comparable to astronomic theory, we will be able to build new knowledge in the same manner.

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[4] Morris R. Cohen, *Reason and Nature* (New York, Harcourt, Brace, 1931), p. 76.

[5] Karl M. Dallenbach, "The Place of Theory in Science," *Psychological Review,* Vol. 60, No. 1 (January, 1953), pp. 38-39.

Theory serves as a guide to new knowledge by suggesting testable hypotheses to the investigator. A theory is fruitful to the extent that it does produce hypotheses.

Theory to Explain the Nature of Administration

One of the most valuable uses of theory is to explain the phenomenon under examination. Thus a theory of administration should help us to understand what administration is. There has been some progress in terms of this criterion in some of the theories proposed to date. In the theory proposed by the Midwest Administration Center, Getzels claims that administration may be conceived of:[6] "*structurally* as the hierarchy of subordinate-superordinate relationships within a social system. *Functionally,* this hierarchy of relationships is the focus for allocating and integrating roles and facilities in order to achieve the goals of the social system." Although this may not be *the* nature of administration, it is a clearly stated testable conception of administration. It is a convenient way of thinking of administration and has provided the basis for many studies. Other theories, however, may provide more useful ways of thinking about the nature of administration.

DEFINITION OF THEORY

What, then, is a theory? To this point we have discussed what theory is not, the capability of the content of administration to be treated in a scientific manner, and the criteria which any theoretical content must meet. Now we must have a clear, definitive statement as to what theory is. At present, there is no generally accepted definition or use of the word *theory*. It would seem that, in order to make progress, we should accept for the time being a common definition of theory and restrict its use to that one definition. This type of discipline is not usual in the field of administration although it has long been the practice in the physical sciences. If the commonly accepted definition does not prove useful, it can be revised in a more helpful direction.

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[6] Jacob W. Getzels, "Administration as a Social Process," in Halpin, ed., *op. cit.*, p. 151.

Halpin suggests that we accept Feigl's use of *theory* as the standard and that researchers and theoreticians restrict the use of the word as does Feigl. We agree that this is a needed step. Adopting Feigl's definition would call for a moratorium on new uses and would mean that theoretical work would be more narrowly limited than previously. Feigl's employment of the term is as follows:[7]

> In order to provide for a terminology which will not constantly involve us in a tangle of confusions, I propose to define a "theory" as a set of assumptions from which can be derived by purely logico-mathematical procedures a larger set of empirical laws. The theory thereby furnishes an explanation of these empirical laws and unifies the originally relatively heterogeneous areas of subject matter characterized by those empirical laws. Even though it must be admitted that there is no sharp line of demarcation (except a purely arbitrary one) between theoretical assumptions and empirical laws, the distinction, at least in the sense of a gradation, is illuminating from a methodological point of view.
>
> One more terminological suggestion may help: Let us speak of scientific explanation wherever more specific or more descriptive statements are derived from more general or more hypothetical assumptions.

This use of the term *theory* leads us to some interesting conclusions. A theory is essentially a set of assumptions from which a set of empirical laws (principles) may be derived. A theory is *not* a law. A theory, itself, cannot be proved by direct experiment.[8] Two illustrations of this from the history of science demonstrate the point. The Copernican Theory of the Solar System was accepted some 150 years before there was direct evidence of its truth. Likewise Boyle's Law and Gay-Lussac's Law, both experimentally derived, were known long before the dynamical theory of gases was formulated. Of the theories in present vogue in educational administration, only the theory developed at the Midwest Administration Center approaches the Feigl definition. It has not, however, been as productive of testable hypotheses as one would expect. It may be that we in administration lack concepts of sufficient strength to enable theories to be constructed with the rigor implied by Feigl.

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[7] Herbert Feigl, "Principles and Problems of Theory Construction in Psychology," in *Current Trends in Psychological Theory* (Pittsburgh, University of Pittsburgh Press, 1951), p. 182.

[8] For an elaboration of this and an enlightening discussion of theory see Norman R. Campbell, *Physics: The Elements* (Cambridge, England, Cambridge University Press, 1920).

BUILDING A THEORY

There are no existing cookbook rules or directions for building a theory, and yet something is known about the process. What, for instance, are the sources of a theory? Are there any systematic procedures which can be recommended? What is there about concept building which is helpful? What guides are there to model building? This section is concerned with the answers to these questions.

The Sources of a Theory of Administration

A discussion of the sources of a theory of administration can be divided into two parts: (1) the methodology of theory, and (2) the content of theory. Under the subtitle of methodology of theory such problems are dealt with as: "What is theory?" "What problems can be attacked through theoretical approaches?" "What are the metes and bounds of theory?" "How are concepts built?" Under the heading of content of theory the following problems are discussed: "What have been the sources of the traditional content?" "What will be the sources of the content of new theories?"

The sources of information of some of the methodological problems of theory were discussed above, and it was found that the relatively new discipline of the philosophy of science was very helpful. Other sources are also helpful.

Sources of a methodology of theory. If we consider theory building as related to the problem of how to generalize one's experiences so as to form a rigorous system for the ordering of experiences and the prediction of the consequences of our behavior, then we are dealing with a problem as old as man himself. In essence, this is the problem which has been faced in the physical as well as the behaviorial sciences, in literature, and in the arts. It would, then, seem to be profitable to search those sources which have attacked this problem over a long period of time.

The problem of the place of values in theorizing has recurred throughout the ages. It would focus our discussion to examine the arguments on this problem in the context of different disciplines and at different times in history. One of the earliest pieces of literature in administration is *The Prince,* written by Niccolo Machiavelli in the early 16th century. This book describes administration in terms of the realism that characterized the actual politics and the spirit of the times. *The Prince* was Machiavelli's attempt to regain the graces of Lorenzo the Magnificent and took the form of advice on the ruling of a city state.

Lerner, writing in the introduction to the Modern Library version of *The Prince,* says of Machiavelli:[9]

> he was able, using the traditional humanist forms, to pour into them a realistic political spirit which his age was acting on but which had never before been so well expressed in political thought. He had the daring to turn against the whole idealistic preoccupation of the humanists. He had the clear-eyed capacity to distinguish between man as he ought to be and man as he actually is—between the ideal form of institutions and the pragmatic conditions under which they operate. . . .
>
> There is in all of us, along with the ethical and normative strain, a strain of hard-headedness and of the acceptance of the framework of human passions and social reality within which we have to work. One can trace it back to Aristophanes and the way in which he always deflated contemporary dreams and illusions by getting back to the essential limits of the human animal. In every generation since him the young men have been divided between the pursuit of some passionate ideal and the hard-bitten inquiry into how things actually get accomplished in a real political world. It is to that pole of our political thinking that *The Prince* gravitates.

[9] Max Lerner, "Introduction," in Niccolo Machiavelli, *The Prince and the Discourses* (New York, Modern Library, 1950), pp. xxxii, xxxv.

In *The Prince* we have one of the first useful volumes on the administration of a political unit. It is useful because Machiavelli was able to see what was actually taking place and was not blinded by a preconception of what "ought to be." The language of how things actually are is a language of power, of how men are moved to do the bidding of other men. Machiavelli was not concerned with whether the processes he recorded were good or evil—he merely described what he saw and related his reporting to the goals toward which the society and its rulers worked.

In the 17th century the same problem occurred in the field of the physical sciences. The scientists of this period were equally concerned with the place of values in science. While many struggled with the problem, Francis Bacon actually resolved the issue by postulating a concept since known as the "ethical neutrality of science." Bacon insisted that religion and morality lay outside the reach of scientific investigation. He saw science as the attempt to master the world in its material aspects, not to help decide what men ought to do or to be. Max Otto, in speaking of Bacon, indicated what the ethical neutrality of science actually means:[10]

> He exemplified in his own person the ethical neutrality of science; the recoil of science from every consideration of the wished-for or the ought-to-be; the concentration of science upon the study of what is, has been, or is bound to come. He was, as it were, science itself.

Again, looking at a different source for guidance on the same problem of values and theory, Thompson reasserted the solution to the problem when he stated,[11] "The values capable of being attached to education and to administration will not be incorporated into the theoretical system itself; instead, the system will treat such values as variables." Thus it appears that the conclusion is the same regardless of the field of thought. A line of thought which had its origin in the 16th century was reiterated in the 17th century in a different field of thought and came down through the history of thought to the present day. In other words, if one is to look for sources of the methodology of a theory of administration, he must look to all of recognized human thought. One is reminded, at this point, of the homely insight of Mary Parker Follett who saw single principles running through all the social sciences and wondered why the scientists should be so parochial. She said,[12] "I do wish that when a principle has been worked out, say in ethics, it didn't have to be discovered all over again in psychology, in economics, in government, in business, in biology, and in sociology. It's such a waste of time."

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[10] Max Otto, *Science and the Moral Life* (New York, Mentor, 1949), p. 78.

[11] Thompson, *op. cit.*, p. 31.

Traditional sources of content. Let us turn to the other aspect of our discussion and look at the content of the theory of administration. Here again we can divide our discussion in two sections. It seems that, on the one hand, Thompson has made a very clean analysis of the sources of the content of traditional theory;[13] and against this must be placed the sources of the new theory of administration which is now emerging. Let us look first at the content of traditional theory.

Thompson points out that there are four primary sources of theory of administration. The first source consists of the *comments and reports made by practicing administrators*. These are reports of self-perception, and the journals of educational administration are replete with this kind of testimonial. When there are attempts to follow up these reports, it is rare to find anything resembling the reported practice in reality. Thompson points out that the insights of practicing administrators, with few exceptions, can seldom be incorporated into systematic theoretic constructs because:[14]

> (1) they lack the time to record and develop such insight, (2) they tend to force their theoretical thinking into the concepts we have taught them and which we constantly reinforce in our writings and speeches so our teachings act as blinders, (3) the platforms we afford them are not conducive to reflective critical thought, but rather to the use of journalistic or visual aid "gimmicks," three well illustrated points, seven rules for success, or simple diagrams understandable at the flicker of an eye.

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[12] Henry C. Metcalf and Lyndall Urwick, eds., *Dynamic Administration* (New York, Harper, 1940), p. 16.

[13] Thompson, *op. cit.*, pp. 24-29.

[14] *Ibid.*, pp. 25, 26.

The second source of the content of a theory is the *survey research of teachers.* In this source of theory, teachers survey, collate, and compare the terminology of distinguished writers in the field of administration, then reduce these materials to their apparent common denominator in order to find the essentials. Another procedure is to develop an expanded set of categories or pigeonholes into which we can put various kinds of information. Some have called the end results of this procedure a "grass roots theory," of which it may be said that it inadequately describes the past and does not face the future. This approach to theory actually results in a classification system or, at best, a static taxonomy. The major shortcoming of this source of theory is the researchers' inability to generate testable hypotheses from these classification systems.

The third source of theory is the *deductive reasoning of teachers.* The deductive approach to theory attempts to postulate a few general ideas which, for one reason or another, appear to be true or plausible or important and to arrive by logical steps at more specific propositions. Probably the best example of this is the work of Simon who postulated some general ideas as to the centrality of decision-making to administration. He built a strong case for decision-making as the central process and then deduced from this some propositions to be included in the theory of administration.

The fourth source of a content of theory is the *adaptation of models from other disciplines.* This practice has been widespread in noneducational administration fields, but in educational administration only the social systems model and the decision model have been used. Noneducational administrative theory models have been adapted from learning models, group dynamics models, game models, leadership models, and, most recently, from the interpersonal psychiatry model. The fact that there is a proliferation of models suggests that theorists are discontent with the more traditional approaches described above and are doing something about their discontent. It also indicates that there appears to be no single model presently used which satisfies any great number of scholars.

New sources of content. Although the traditional sources of content have provided many insights, the time is ripe for a move in another direction. The new direction is toward a complete revision of research in educational administration. At the present time data is collected almost exclusively through the use of questionnaires and short interviews. This procedure is used because the money available for research is insufficient for anything else to be done and because we have not exercised our imaginations sufficiently to devise more expedient ways of carrying out research. If we are to gain the information which will give us descriptions of the behavior of individuals in organizations, then we must abandon our research approach of asking people to check a blank or to write down on a piece of paper the way they perceive themselves. The fallacy has been compounded by many of us who have reported the self-perceptions of administrators and equated the reports with behavior. We need descriptions of the behavior of administrators and others as they work and live in their organizations. Except for a few bits of information we do not have these descriptions at the present time. There is not in the literature a single description of a school system in action over any reasonable period of time—say a semester or a year.

Since what we want are descriptions of administrators as they actually behave on the job, we must revise our methods of research. The truth of the matter appears to be that we do not know enough about the variables in administrative behavior to know which are the dependent and which are the independent variables. One could look to the group dynamics research for illustrations of this, and to the Lewin[15] and to the Butler and Levine[16] studies for specific examples. In the Lewin study, one in which methods of group decision-making were supposedly being studied, it was found that probably the most important variable in the study was a warning to one of the two groups that someone would check up on each housewife to see if she was serving sweetbreads to her family. This was especially true since the other group was not told this. In the Levine-Butler study, also a study of group decisions, it developed that the study actually was concerned with implementing a decision which had been arrived at independent of the subjects. Use of the experimental method in administrative research is premature at the present time.

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[15] Kurt Lewin, "Studies in Group Decision," in Dorwin Cartwright and Alvin Zander, eds., *Group Dynamics* (Evanston, Ill., Row, Peterson, 1953), pp. 387-301.

[16] Jacob Levine and John Butler, "Lecture vs. Group Decision in Changing Behavior," *Journal of Applied Psychology*, No. 1 (February, 1952), pp. 29-33.

We in the social sciences have thought that we were using the scientific method when we attempted to use the method of experimental science; yet we have actually overlooked the methodology of science most applicable to our peculiar problems. Rather than the experimental method, we should be using the *observational* approach of the physical sciences and of some of the social sciences. Consider how the astronomer gathers his data concerning the nature of the universe. He certainly cannot set up an experiment in order to determine the position of Venus in relation to Mars on a particular date. Neither can he determine the nature of the atmosphere of Pluto by means of an experiment in his laboratory. Rather he must perfect *ingenious methods of observation* in order to be able to record the atmosphere of Pluto. Researchers in educational administration should turn to the observational and away from the experimental methods of research.

One can also look to the field of anthropology which has apparently moved in the direction which seems now to be most fruitful for us in administration. A friend of the author who is a mechanical engineer working in the field of administrative theory says that he is most comfortable when talking with an anthropologist—more comfortable than when he is talking with any others in the behavioral sciences. This is most likely so because the anthropologist has adopted the methods of observation of the physical sciences and has adapted these in a way that is peculiarly beneficial. He asks these questions: "Who says what to whom?" "With what effect?" In noting who interacts with whom and then what the results are, a description of the social system in which the parties are operating is possible.

The observational method has also been used by researchers in other areas of administration, the most notable being those of the Western Electric Company under Mayo, Roethlisberger, and others. The method is a proved one, and educational administration is long overdue in its use.

Facts and Observations

All theory building starts with observations of some sort or other. One could hypothesize that the quality of the theory is directly related to the quality of the observations made by the theorist. A discussion of the nature of observations is pertinent at this point.

Observations must be reported in the form of facts. What is a fact? Of the several definitions of a fact, the discussion by Johnson appears to be most helpful at this time:[17]

> If you would recognize a fact when you see one and make the most of it, there are then four things about any fact that you must be clear about; it is necessarily incomplete, it changes, it is a personal affair, and its usefulness depends on the degree to which others agree with you concerning it.

The wisdom of this statement is obvious; no one can see all of an event. Human observers vary tremendously in their ability to perceive any single event. This is a piece of evidence too well documented to belabor. The event itself is constantly changing; the event is being affected by the presence of the observer; and, finally, unless others can agree with the description of the event, one cannot be certain that the report of the event was not a fantasy.

The above statement suggests a set of criteria for the selection of facts (observations) from which to build a theory. The first criterion concerns the observer. In educational administration there are very few reports of events from observers who were not themselves involved in the event they reported. One major research study of administrative behavior gathered all of its observations from consultants, coordinators, and administrators who were themselves responsible for the success or failure of the events which they were reporting. This is in direct contrast with the painstaking care with which the designers of the Western Electric study selected and placed their observers.[18] They insisted that the observer should not be in a position of authority

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[17] Wendell Johnson, *People in Quandaries* (New York, Harper, 1946), p. 94.

[18] Fritz J. Roethlisberger and William J. Dickson, *Management and The Worker* (Cambridge, Harvard University Press, 1939).

—going so far as to have the observer's desk at the back rather than at the front of the room. He could never argue with the workers. He could not intrude on a conversation. He could never violate a confidence. He could never set himself apart from the group through behavior or manner of speech. In other words, he was as detached and objective an observer as it was humanly possible to be.

Because reports of events made by those responsible for the success or failure of those events are very apt to be biased, such reports are not acceptable as basic facts from which to build a theory. This conclusion is justified by research in the field of perception which caused Murphy to state:[19] "For the process of social perception in general, few things are so important as the difference between what we do not perceive and what we do not acknowledge we perceive."

The second criterion for the selection of facts in theory building concerns the facts themselves. On this point Guthrie urges that:[20]

> . . . we remember to conform to the rules that have been responsible for the remarkable achievement of the scientific tradition, the use of objective evidence which means a basis in facts open to the observation of all who are interested and described in public terms that must be accepted by other scientists.

The emphasis here is on the positive form of what so many have said negatively concerning research in educational administration. Reports of observations must be couched in clear, understandable language and described in sufficient detail to enable readers to understand the methods used and the observations made.

Rules for Theory Building

Is it possible to set down a set of rules which could guide an individual in the building of a theory? In Homans' book, *The Human Group,* a set of rules is recommended to those engaged in building theory. He summarizes his discussion of theory building by stating the following set of rules:[21]

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[19] Gardner Murphy, "Knowns and Unknown in the Dynamics of Social Perception," in Muzafer Sherif and M. O. Wilson, eds., *Group Relations at the Crossroads* (New York, Harper, 1953), p. 149.

[20] Edwin R. Guthrie, "Psychological Facts and Psychological Theory," *Psychological Bulletin,* Vol. 43, No. 1 (January, 1946), p. 19.

1. Look first at the obvious, the familiar, the common. In a science that has not established its foundations, these are the things that best repay study.
2. State the obvious in its full generality. Science is an economy of thought only if its hypotheses add up in a simple form a large number of facts.
3. Talk about one thing at a time. That is, in choosing your words (or, more pedantically, concepts) see that they refer not to several classes of fact at the same time but to one and one only. Corollary: Once you have chosen your words, always use the same words when referring to the same thing.
4. Cut down as far as you dare the number of things you are talking about. "As few as you may; as many as you must" is the rule governing the number of classes of fact to take into account.
5. Once you have started to talk, do not stop until you have finished. That is, describe systematically the relationships between the facts designated by your words.
6. Recognize that your analysis must be abstract, because it deals with only a few elements of the concrete situation. Admit the danger of abstraction, especially when action is required, but do not be afraid of abstraction.

CONCEPT DEVELOPMENT

Any theory is based upon a set of concepts, properly defined and relevant to the major theme of the theory. The first and major task in the construction of a theory of administration is the development of a set of concepts which will permit the description of administrative situations. At present we do not have these concepts. It appears that one of the major roadblocks in the path to adequate theory is the lack of concepts which can be used to describe administrative situations. What is meant by a concept? A concept is simply a term to which a particular meaning has been attached. Once the meaning has been attached to the term, the term should always be used with this particular meaning; and, conversely, whenever a particular meaning is intended, the same term should be used. If we could make this single step forward—that is, the use of the same concept by all to describe the same meaning—it would be a giant step. To illustrate what is meant in this situation let us quote a recent book on theory in educational administration. The following two sentences are in consecutive order: "The terms adaptability and quality are used interchangeably in this book. Of course they are not the same." This is an example of what we are talking about. If the two terms are not the same, why should they be used interchangeably? And if the two terms are used interchangeably, why are they not the same?

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[21] From *The Human Group* by George C. Homans, copyright, 1950, by Harcourt, Brace and Company, Inc., and reprinted with their permission, pp. 16, 17.

It almost seems as though theorists in administration have not advanced beyond the concept level of the medieval alchemists. You will recall that the alchemists attempted to describe heat in terms of the concept *caloric*. This concept was defined as a substance which was odorless, colorless, weightless, and invisible. A space was warm to the extent that it was filled with caloric, cold to the extent that caloric was absent. Although caloric permitted description of heat phenomena at a rather crude level, no real progress was made toward a theory of thermodynamics until the concept of kinetic energy was introduced. It seems as though we are attempting to describe administrative situations with concepts of the same order as caloric.

It would be of value at this point to look back in the history of science to see how this particular concept relating to heat changed from that of caloric to kinetic energy. Although the use of the concept *caloric* enabled the scientists of the time to work with the phenomenon of heat, it was not a concept which satisfied all scientists to the same degree. For example, Count Rumford was engaged in the manufacture of cannons. The cannons at that time were made by boring cylinders of solid metal. They were bored in a very slow and laborious manner by a horse-propelled drill. The cylinders were cooled by being immersed in water. Rumford observed that the metal chips from the drill were always very hot when they hit the water. He felt disturbed because he was not able to see how the heat in the chips could be accounted for by the concept of caloric. It appeared to him that the heat was a product of motion rather than the introduction of a substance such as caloric. A few years later Joule set up an experiment by which he demonstrated conclusively that the heat was a product of motion, that, in fact, heat was motion. He was able to demonstrate that as a set of paddles was moved in water the rise in temperature was directly proportionate to the speed of the paddles.

You will note that there was first a concept, caloric, which enabled people to discuss heat in a rather gross manner. There was next an observation which threw doubts on the validity of the concept of caloric. Following the observation there was experimentation to prove the validity of the new concept of heat as kinetic energy. In this rather simplified fashion, leaving out the work of many intermediary scientists, has been traced the path through which, in all probability, theorists will have to move in the creation of concepts in administration. At the present time it appears as though many are attempting to leap frog the necessary step of observation.

Operationism

Other writers on administration have been concerned about concept development. Simon has presented this concern and has offered an approach to the solution of the problem:[22]

> Before a science can develop principles, it must possess concepts. Before a law of gravitation could be formulated, it was necessary to have the notions of "acceleration" and "weight." The first task of administrative theory is to develop a set of concepts that will permit the description, in terms relevant to the theory, of administrative situations. These concepts, to be scientifically useful, must be operational; that is, their meanings must correspond to empirically observable facts or situations.

The clue to the approach to be used in correct concept formation is that of *operationism*. This approach is generally credited to Bridgman, a physicist, whose book, *The Logic of Modern Physics*, presents the basic tenets of operationism. The idea of operationism is very simple and is stated by Bridgman as follows: "In general, we mean by any concept nothing more than a set of operations; *the concept is synonymous with the corresponding set of operations.*"[23] In other words, operationism is the way of thinking which holds that (1) concepts are given their meaning by the methods of observation or investigation used to arrive at them, and (2) concepts have no meaning apart from their operations.

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[22] Herbert A. Simon, *Administrative Behavior* (New York, Macmillan, 1950), p. 37.

Bridgman illustrated the idea of operationism (sometimes called operationalism) by discussing the meaning of the concept *length.* He noted that the length of an object can be defined by indicating the operations one must perform to determine the length. If one is to determine the length of a table, for instance, one is required to place a measuring stick, a foot ruler, in such a way that one of its ends coincides with one end of the table. One must then mark on the table the other end of the ruler and then move the ruler along in a straight line extension of its previous position until the first end coincides with the previous position of the second end. This process must then be repeated until the number of times the ruler has been applied is known. This gives an approximation of the length of the table as corrections need to be made for such conditions as temperature and gravitation. However, the concept of length is dependent upon the operations employed, and if a different set of operations, say the use of a steel tape, is employed, the length is different.

In education we have made some use of operational concepts. For example, *mental age* means that under certain standard conditions a child can perform certain tasks such as repeating a set of numbers given him by the examiner, defining a word, or solving a puzzle. Mental age is defined by the operations employed.

On a more sophisticated level, we have the concept of IQ which is still an operational concept. IQ is obtained by dividing mental age by chronological age, both of which are operational concepts. A concept is operational if it has a link to other operational concepts.

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[23] Percy W. Bridgman, *The Logic of Modern Physics* (New York, Macmillan, 1927), p. 5.

A concept can be operational in some of its uses but not in others. Take the concept of quality as an example. To Mort, quality is operational because it refers to a score on a form known as *The Growing Edge*. Others use the term as a halo concept without specifying the operations one would perform to define quality. It should be obvious that the operations used to define the concept tend to change the concept; therefore the *operations must be stated.*

Hempel has formulated the basic tenets of operationism, and they are stated below as a summary for this section:[24]

1. "Meanings are operational." To understand the meaning of a term, we must know the operational criterions of its application, and every meaningful scientific term must therefore permit of an operational definition. Such definition may refer to certain symbolic operations and it always must ultimately make reference to some instrumental operation.
2. To avoid ambiguity, every scientific term should be defined by means of one unique operational criterion. Even when two different operation procedures . . . have been found to yield the same results, they still must be considered as defining different concepts . . . and these should be distinguished terminologically because the presumed coincidence of the results is inferred from experimental evidence, and it is "not safe" to forget that the presumption may be shown to be spurious by new, and perhaps more precise, experimental data.
3. The insistence that scientific terms should have unambiguous, specifiable, operational meanings serves to insure the possibility of an objective test for the hypotheses formulated by means of those terms. Hypotheses incapable of operational test or, rather, questions involving untestable formulations are rejected as meaningless.

"If a specific question has meaning, it must be possible to find operations by which an answer may be given to it. It will be found in many cases that the operations cannot exist, and the question therefore has no meaning."[25]

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[24] Carl G. Hempel, "A Logical Appraisal of Operationism," in Philipp G. Frank, ed., *The Validation of Scientific Theories* (Boston, Beacon Press, 1956, copyrighted by American Association for the Advancement of Science), pp. 53, 54.

[25] Bridgman, *op. cit.*, p. 28.

MODELS

In the past few years the word *model* has been introduced to educational administrators. What is a model? And what is its use? Does it have any value to students of educational administration?

When we say that whatever we are studying is like something else, the something else is a model for what we are studying. The something else, to be of value, should be well known to the student, preferably simpler, and easy to work with. A clear illustration of the use of a model is given by Szasz:[26]

> Simply by comparing the structure or function of a mechanism whose workings are familiar with the structure or functions of another which is less well understood, some degree of mastery usually results. The traditional model of pain is a ringing bell. The noise of the bell, in this metaphor, corresponds to "pain." The model lends itself to the formulation of several relevant questions, such as, "Who pushes the bell?" and "How do we get rid of the noise?"
>
> In a patient with an acutely inflamed appendix, we answer the first question by picturing the diseased organ as "pushing the bell." The proper corrective procedure to eliminate the noise is to remove the appendix.

It can be seen that the chief values of a model are that it enables one to ask questions and it offers clues as to how the questions can be answered.

Kinds of Models

As one would expect when any term is introduced it has a wide and varied use. *Model* is no different from any other term, and it is now used in a most ambiguous fashion. English and English point out many of the uses of the term, some in line with common usage, others more in line with scientific usage.[27]

> 1. a small copy of the real thing. 2. that which is to be copied, esp. an ideal or perfect form of something—Syn. pattern. 3. a physical

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[26] Thomas S. Szasz, *Pain and Pleasure* (New York, Basic Books, 1957), pp. v, vi.

[27] Horace B. English and Ava Champney English, *A Comprehensive Dictionary of Psychological and Psychoanalytic Terms* (New York, Longmans, Green, 1958), p. 326.

device that shows how something works (a working model) or that displays the relationships of parts of a whole (e.g. a model of the solar system). . . . 4. a description of a set of data in terms of a system of symbols, and the manipulation of the symbols according to the rules of the system. The resulting transformations are translated back into the language of the data, and the relationships discovered by the manipulations are compared with the empirical facts.

Although *model* is used in various ways, the fourth meaning above is probably the most precise and theoretically significant meaning of the word. It should be noted that this meaning is comparable to the definition given above for *theory*. This is a general use of the term *model* and is one of two major uses of the term.[28]

The second use of *model* deals with what is called *isomorphism* and has two components. First, there is a one-to-one relationship between the model and that of which it is a model. Second, if certain relationships are maintained, the model is said to be isomorphic. Thus, if the laws of one theory have the same form as the laws of another theory, one may be said to be a model for the other.[29] What is now happening is that a theory about which there is considerable consensus is now being used as a model for the unknown area. A good example of this is the social system theory which is being used by the Midwest Administration Center as a model for the study of administration.

It can be said that there are two meanings in general use for the term *model;* one is as a synonym for "theory," and the other is as an isomorphism for a little-known subject.

Mathematical models. A special case of the isomorphic model is the mathematical model. It may be possible that a theory may have the same form as a set of mathematical truths. In other words, the relationships within the empirical theory may be the same as the relationships within a certain mathematical system. As a result of this isomorphism, numbers may be assigned to the properties of the empirical theory; and these numbers may then be added, subtracted, or manipulated in any other fashion which the mathematical system will allow. Simon's work with Homans' theory is given in Chapter 3 and is an example of a mathematical model.

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[28] May Brodbeck, "The Philosophy of Science and Educational Research," in "Methodology of Educational Research," *Review of Educational Research,* Vol. 27, No. 5 (December, 1957), p. 436.

[29] *Ibid.,* p. 437.

It can be seen that one may predict rather easily from a mathematical model, but these models have three additional uses which are equally valuable. These are: (1) the organizing function, (2) the analytical function, and (3) the mediating function.[30] The organizing function of a model relates to the possibility of relating a great deal of data to a very few concepts. The analytical function relates to the fact that one cannot put a vague notion into a mathematical model. The very form of the model forces one to make a precise analysis of the concepts and data with which he is working. The mediating function of mathematical models occurs when the problems of various disciplines are cast into models. When this happens, it can be seen that there are cross-disciplinary similarities in the problems which were originally thought to be unique to each discipline.

SUMMARY

If the study of administration is to become scientific, administration must assume the characteristics of a science. Inquiry in administration must come to be characterized by objectivity, reliability, operational definitions, coherence or systematic structure, and comprehensiveness. The content of administration is capable of being handled in a scientific manner even though it is not now being handled in that manner.

Administration is a specialized branch of science and must, therefore, meet an additional set of criteria. A theory of administration must provide guides to action, to the collection of facts, to new knowledge, and to explain the nature of administration.

A very restricted definition of theory is accepted, and a case is made for its use. The term *theory* should be restricted to mean a set of assumptions from which a set of empirical laws (principles) may be derived.

There are two sources from which a theory of administration can be built. The sources of the methodology of theory are chiefly historical and are to be found in all of the sciences, biological, natural, and behaviorial. The sources of the content of administration are the comments and reports made by practicing administrators, the survey research of teachers, the deductive reasoning of teachers, the adoption of models from other disciplines, and in the creation of ingenious methods of observation of administrators at work. Facts are defined, criteria for observations established, and a set of rules for theory building presented.

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[30] Paul Lazarsfeld, "Concluding Remarks," in *Mathematical Models of Human Behavior* (Stamford, Conn., Dunlap & Associates, 1955), p. 99.

One of the major problems in theory construction is the development of operational concepts. Operationism, which means that a concept is nothing more than a set of operations, is advocated as the method by which concepts should be developed. The chapter concludes with a discussion of models and model building.

3

Some Attempts at Theorizing in Administration

We have discussed the meaning of theory, its use, and its development. Let us now turn to a discussion of some of the attempts at theory building in the past. It will not be possible to describe all of the attempts because of space limitations; therefore a small but representative number have been selected for presentation here.

The objective of this chapter is to present eight theories of administration: four in the field of education, and four from other fields of administration. Simple criteria were used in their selection. Those selected have been published in readily accessible form; they illustrate different approaches; they have received some attention and serious consideration by other scholars; and they indicate the present level of theory building in administration. The purpose of this chapter is to present eight theories in capsule form, *not* to present a critique of the theories. If a comment which could be construed as critical does appear, it is because it seemed to be absolutely necessary and the urge to write it could not be resisted. This chapter is intended primarily as a resource to acquaint the reader with various approaches to theory building.

THEORIES OF EDUCATIONAL ADMINISTRATION

The four attempts at educational theory building to be discussed are those of Mort, Sears, the Southern States Cooperative Program in Educational Administration Center, and the Midwest Administration Center. Mort published his theoretical work first in 1946 and in revised form in 1957. Sears published his work in 1950, SSCPEA in 1955, and the Midwest Center in 1958. A considerable difference is to be observed in these four theories; but no trend can be noticed in these four, and they are not presented for this purpose.

Mort

The fundamental rationale of the theory advanced by Mort, aided in the revised edition by Ross, is clearly stated in the foreword of the volume:[1]

> (1) the culture has a series of definable sanctions, (2) those sanctions have reasonable bases and when stated as principles are dimensions of goodness in action, (3) these principles can be a series of tests to decide whether or not a proposed act will be a wise action, and (4) such principles can have specific application in illuminating and making rational the subject matter of professional training for school administration.

The sanctions to which Mort refers are elsewhere defined as value concepts; consequently, to Mort the four terms—*value concepts, cultural sanctions, criteria,* and *principles*—are synonymous. Great stress is laid upon *common sense* as the source of the value concepts, cultural sanctions, criteria, and principles. Although the process of deducing the principles from common sense is not presented, the importance of the principles is stressed throughout the book. In fact, it is stated that "They [the writers] do believe that they [the principles] are a unique series of considerations without which any over-all treatment of school administration will fall short of the mark."[2]

Fourteen principles grouped into three categories are stated and discussed, and the relevance of each to problems in administration is demonstrated. The three groups and the subsumed principles are:[3]

> *The humanitarian group* (the public sense of the right in relationships between persons)

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[1] Paul R. Mort and Donald H. Ross, *Principles of School Administration* (New York, McGraw-Hill, 1957).

[2] *Ibid.*, p. 27.

[3] *Ibid.*, pp. 27, 28.

- (1) structural democracy
- (2) operational democracy
- (3) justice as a guide to administration
- (4) equality of opportunity as a guide to administration

The prudential group (the public sense of the practical)

Prudence of caution

- (5) economy
- (6) checks and balances
- (7) liberty and license
- (8) responsibility and authority

Prudence of understanding

- (9) simplicity
- (10) loyalties
- (11) inertia

The tempo group (the impacts of constant and changing values, needs, and insight)

- (12) adaptability
- (13) flexibility
- (14) stability

It is acknowledged by Mort and Ross that the principles are contradictory and that they are not all equally applicable in a given situation. The solution to this dilemma is offered in terms of a concept called *balanced judgment.* The writers state, in explaining balanced judgment, "Perhaps the most useful suggestion as to how to achieve balanced judgment is to seize each situation demanding it as an opportunity to exercise resourcefulness in finding applications of these various principles."[4] Several examples are given to illustrate the application of problems to the principles.

Sears

The major assumption of the theory advanced by Sears is that the administrative function derives its nature from the nature of the services it directs.[5] Sears indicates that he has been strongly influenced in his thinking by those in the field of business and governmental administration, including Taylor, Fayol, Gulick, and Urwick. He attempts to integrate the writings of these men with his own knowledge of the field of education.

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[4] *Ibid.,* p. 249.

How does Sears develop the point of administrative theory derived from service? He achieves it largely by contrast. He contrasts a certain assumption with an opposing assumption. He points out that one may assume that the ways of organizing, directing, and performing all the functions of administration are accomplished by applying authority according to principles that are derived from a study of administration itself.[6] In other words, one first devises his administrative mechanism, then takes it to a school, and sets it going. As contrasted with this, one could assume that one first studies the learning, teaching, counseling, supervision, and research activities of education, and learns how to organize schools and how best to direct and control operations, and then, in time, develops a theory of administration.[7] Sears indicates that the former would be authority-centered and the latter need-centered. Sears expresses his concept of administration as follows:[8]

> Starting with the idea that the nature of administration derives from the nature of the process of individual learning, the nature of our culture (including especially our government, our laws, our system of economy), and the capacity of the administrator, it is reasoned that administration is not a mechanism or a system with laws inherent in itself, but is derived from a study of the service it is to manage. . . .
>
> This conception of administration must be made a fact for study, because it must be our insurance against the opposite concept, autocracy, wherein administration is a system or a force ready-made, self-powered, self-guided, self-imposed, and responsible to itself only.

Sears took a strong position in 1950 on a question which is now taking much of the time of educational administration theorists. Is administration primarily *adjectival*, or is the *corpus* of administration so large that it encompasses most of what is called administration regardless of the function administered? The tide of opinion now seems to be moving away from Sears's point-of-view.

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[5] Jesse B. Sears, *The Nature of the Administrative Process* (New York, McGraw-Hill, 1950).

[6] *Ibid.*, p. 13.

[7] *Ibid.*, p. 14.

[8] *Ibid.*, pp. 550-551.

Throughout the study Sears has a great deal of difficulty with the concept of *authority*. As a principle of administration, he insists that "in managerial work authority has a limited sphere in which to work."[9] Yet he devotes a majority of the pages of the book to a discussion of authority. Part of his difficulty arises from an inadequate and limited definition of the term and the rest from an inability to reconcile his conception of authority with his concept of administration. He at one time defines authority as being of four varieties: law, knowledge, social standards, and personal tastes; yet he generally uses authority only as a legal concept. His analysis is further complicated by defining most of the categories of administration in terms of authority. (He uses Fayol's classification: planning, organizing, directing, coordinating, and controlling.) For example, he states, "direction is authority on the move";[10] "organization must have a place or places of residence for authority, and there must be channels for the flow of this energizing force";[11] and "control can be effective only by the applying of some form of authority."[12]

Southern States CPEA Center

Several of the Cooperative Program in Educational Administration centers devoted considerable effort to the development of theoretical approaches to educational administration. One of these was the Southern States Center at George Peabody College where Professor Orin Graff had the greatest influence in shaping the direction of the inquiry. The central theme of this approach is called the *competency concept* and was originally published in a volume entitled, *Better Teaching in School Administration.*[13]

The authors believe that competency in educational administration results when an "individual exhibits *behavior* that enables him to perform a particular *administrative task* in the most *desirable manner.*"[14] It can be readily seen that the competency concept emphasizes values or what *ought to be*. This is the most distinguishing factor of this approach, and the authors state this quite clearly:[15]

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[9] *Ibid.*, p. 540.

[10] *Ibid.*, p. 127.

[11] *Ibid.*, p. 110.

[12] *Ibid.*, p. 206.

[13] Southern States Cooperative Program in Educational Administration, *Better Teaching in School Administration* (Nashville, Tenn., George Peabody College, 1955).

> It was also recognized that in manv instances the designation of a task and the choice of a method of performing it depended upon a value base which an individual might possess. Of course, the performance of any task invariably necessitated exercising particular skills, abilities, and understandings which an individual had to possess. It was recognized that this value base which penetrated an individual's behavior was actually a theory of educational administration.

Thus we have a definition of theory which is the direct opposite of what has been the accepted definition in all other areas of the physical and social sciences. This definition was followed closely, and the resulting design of the inquiry was inevitable. The best way to present the competency concept is to illustrate its three elements: Job, Theory, and Know-How.[16]

Job	Critical Task: Initiating and Maintaining a System of Child Accounting and Attendance
Theory	Method of Performing Critical Task (An Operational Expression of Theory): In initiating and maintaining a system of child accounting and attendance, administration should . . . Establish and operate a continuing school census. Determine the geographical distribution of children and predict geographical shifts in population of children. Provide for recording all information concerning children in a cumulative file. Develop with the professional staff procedures for dealing with attendance and enrollment problems. Analyze and interpret age-grade distributions in terms of educational needs.

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[14] *Ibid.*, p. 46.
[15] *Ibid.*, p. 46.
[16] *Ibid.*, p. 131.

Know-How Operational Beliefs, Skills, Knowledges Needed to Perform the Task: In initiating and maintaining a system of child accounting and attendance, an administrator needs the following . . .

> Operational Beliefs: All projections concerning educational program and facilities should be based upon factual information concerning children to be educated. All pupils have a right to receive education at public expense.
>
> Knowledge and Information: Knowledge of the kinds of forms needed to collect essential data concerning child attendance, of official records from which vital statistics can be obtained, of efficient record-keeping of various age-grade distributions and of attendance laws and regulations.
>
> Technical Skills: Skill in procedures for collecting essential data on child attendance, in interpreting and recording pupil data, in projecting and estimating future demands upon the school system, in organizing people to collect needed data about pupil attendance.

There are 52 of these Critical Tasks divided among eight Critical Task Areas. There is an obvious validity concerning the necessity of what is called the task. Certainly these tasks have been and are now part and parcel of the job of administration. Another observation which is necessary here is the use of the term *operational* which, as in the case of the use of the term *heory,* differs considerably from use in the fields where the term originated.

Midwest Administration Center

Another CPEA Center in which there has been considerable activity is the Midwest Administration Center at the University of Chicago. One of the objectives of its program under a Kellogg Foundation grant (1955-1959) was the formulation of a general heory of administration to guide both practice and research.[17] Two aspects were reported at the outset and have been sustained throughout the program. They are: (1) to clarify administrative functions and roles as, for example, the deliberative or policymaking role, the consultative role, and the adjudicative or conflict-resolving role; and (2) to have other divisions of the University contribute to the development of the general theory.

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[17] Francis S. Chase, "New Program in Administration," *Elementary School Journal* (February, 1955) p. 311.

A recent paper by Getzels, one of the leading figures in the work at Chicago, provides the basis for the presentation here of the Midwest Administration Center's theoretical approach.[18] Getzels' theory is hypothetico-deductive in nature and describes administration as a social process in which behavior is conceived as a function of both the nomothetic and the idiographic dimensions of the social system.

Getzels first presented a model and then derived a series of hypotheses from the model. Administration is conceived of structurally as the hierarchy of subordinate-superordinate relationships within a social system; and functionally this hierarchy of relationships is the locus for allocating and integrating roles and facilities in order to achieve the goals of the social system. The social system is comprised of two dimensions: the nomothetic which consists of institution, role, and expectation; and the idiographic which consists of the individual, his personality, and his need-disposition. Two sets of definitions are presented, namely: institution is used to designate agencies established to carry out "institutionalized functions for the social system as a whole";[19] and roles are the "dynamic aspects" of the positions, offices, and statuses within an institution. Roles are defined in terms of role expectations, and roles are complementary.

The model is presented diagramatically in the accompanying chart.[20] In this diagram each term on each of the two axes is the analytic unit for the term preceding it. The social system, for example, is defined by its institutions, each institution by its constituent roles, and each role by its expectations.

It can be seen that a given act is derived simultaneously from both the idiographic and the nomothetic dimensions. The gen-

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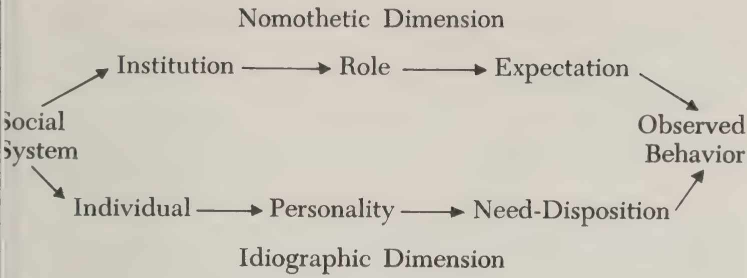
[18] Jacob W. Getzels, "Administration as a Social Process," in Andrew W. Halpin, ed., *Administrative Theory in Education* (Chicago, Midwest Administration Center, 1958), pp. 150-165.

[19] *Ibid.*, p. 153.

[20] *Ibid.*, p. 156.



eral equation for this relation is $B = f (R \times P)$, where B is observed behavior, R is an institutional role, and P is the personality of the particular role incumbent.[21]

Getzels reported two sets of derivations and applications from this model, with research studies tending to confirm the deductions. The first is that there are two levels of interaction in any social system, the nomothetic and the idiographic. The publicly prescribed nomothetic relationship is enacted in two separate private idiographic situations—one by the subordinate and the other by the superordinate. The functioning of the administrative process was hypothesized to be dependent on the nature of the overlap of the perception of the expectations of the subordinate and superordinate. The second deduction deals with conflict. The model points to three sources of conflict in the administrative setting: role-personality conflict, role conflict, and personality conflict. The second deduction has proved to be particularly useful in the study of dissatisfaction among personnel, and Getzels reported its use in the analysis of a situation at the Air University.

GENERAL THEORIES OF ADMINISTRATION

Theoretical work in administration outside the field of education has been productive of a much larger quantity of theories than has education. That more quality has been produced is not so clear. Space prevents us from presenting all of the theories which have been spun in the past, and a selection has necessarily been made. An attempt has been made to select theoretical work representative of the range of efforts presently recognized as significant.

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[21] *Ibid.*, p. 157.

Argyris-Bakke

For a number of years a theory of behavior in formal organizations has been evolving at the Yale Labor and Management Center. The basic reference used here is *Executive Leadership* by Argyris.[22] A set of assumptions is first stated, and from these assumptions a set of organizational processes is derived. The most important assumption is that the developmental processes and goals of the individual and his organization are, at crucial points, fundamentally different and antagonistic.[23] The processes derived from the hypotheses are:

1. *Workflow* process—the exact behavior required by the purpose of the organization
2. *Reward and penalty* process—to be applied to people in the organization
3. *Authority* process—to coordinate, control and direct the peopl in the organization (agents), to compel attention to the or ganizationally relevant and to the personality needs of th agents, and to maintain a constant vigil over the fusion pro cess between the agents and their jobs
4. *Perpetuation* process—to keep the organization going
5. *Identification* process—to help individuals identify with th organization
6. *Communication* process—to provide ways, media, and paths f communication among the agents
7. *Status* process—to rank agents, materials, and ideas in terms their importance or prestige

The *fusion* process is emphasized in the work of the Ya Center. Since the individual lives to fulfill his needs and achie his goals and cannot do this without the organization, and th organization exists to fulfill its needs and achieve its goals, a fusion of the two (individual and organization) is necessary. The fusion process is said to occur when the "individual obtains the maximal expression of his personality that is possible, and . . . simultaneously, the organization has its demands fulfilled at the highest possible level."[24]

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[22] Chris Argyris, *Executive Leadership* (New York, Harper, 1953). Oth discussions of the same approach may be found in Chris Argyris, *Perso ality and Organization* (New York, Harper, 1957), E. Wight Bakke, *Bon of Organization* (New York, Harper, 1950), and E. Wight Bakke, *(ganization and the Individual* (New Haven, Yale Labor and Managem Center, 1952).

[23] Argyris, *Executive Leadership, op. cit.*, pp. 129-130.

Growing out of the above frame of reference and the data in his study, *Executive Leadership,* Argyris postulates the *dependency concept* of organizational leadership. He points out that if a unified, self-maintaining work group is to be created the nembers of the group are placed in a dependency relationship o the organizational leader. This comes about because a work group is concerned only with the work-flow process; in order to ncorporate his work group into the formal organization, the eader supplies the missing processes, such as authority, rewards and penalties, and communications.

Simon

Simon differs from the above theoretical works in that he does not offer a theory but, feeling that a theory at this time would be premature, offers a point of departure. This section deals with wo of Simon's works: *Administrative Behavior,*[25] and "Some Strategic Considerations in the Construction of Social Science Models."[26] In the first some underlying concepts were preented, and in the second some mathematical formulations were presented.

Simon presented the points of view that currently accepted principles of administration are "little more than ambiguous and mutually contradictory proverbs"[27] and that we must search for new approach to theory. His analysis of the literature of administration led him to conclude that there is a steady shift f emphasis from the *principles* of administration themselves o a study of the *conditions* under which the principles are aplicable. Simon stated the central thesis of his study in this manner: "an understanding of these underlying conditions for the applicability of administrative principles is to be obtained from an analysis of the administrative process in terms of decisions."[28] The aim is, then, to increase the rationality of organizational decisions. If there were no limits to human rationality there would be no need for administrative theory: one would merely select the best solution and apply it. There are limits, however, and these are flexible, depending upon the organization's structure. Administrative behavior is dependent upon the irrational and nonrational elements that bound the area of rationality. With this frame of reference Simon states:[29]

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[24] *Ibid.,* p. 130.

[25] Herbert A. Simon, *Administrative Behavior* (New York, Macmillan, 50).

[26] Herbert A. Simon, "Some Strategic Considerations in the Construcon of Social Science Models," in Paul F. Lazarsfeld, ed., *Mathematical hinking in the Social Sciences* (Glencoe, Ill., Free Press, 1954).

> Two persons, given the same possible alternatives, the same values, the same knowledge, can rationally reach only the same decision. Hence, administrative theory must be concerned with the limits of rationality, and the manner in which organization affects these limits for the person making a decision. The theory must determine . . . how institutionalized decision can be made to conform to values developed within a broader organizational structure. The theory must be a critique of the effect (judged from the point of view of the whole organization) of the organizational structure upon the decisions of its component parts and its individual members.

It would seem that Simon is writing the theory behind *The Organization Man*! In terms of a description of what many modern organizations are attempting, it would appear that Simon has a solid grasp of reality.

One of the more interesting developments in theory in the past few years has been Simon's work with mathematical models. Simon used Homans' system of theoretical relationships within a group and transposed the statements into formulae.[30] Homans' system contains four variables which Simon developed in mathematical form:

1. The intensity of interaction (communication) among members of a group is designated by $T(t)$.

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[27] Simon, *Administrative Behavior, op. cit.*, p. 240.

[28] *Ibid.*, p. 240.

[29] *Ibid.*, p. 241.

[30] Simon, "Some Strategic Considerations in the Construction of Social Science Models," *op. cit.*

2. The amount of friendliness (or group identification) among group members is designated by $I(t)$.
3. The total amount of activity of a member of the group is designated by $W(t)$.
4. The activity of the group required for survival is designated by $F(t)$.

Note: Each variable is indicated as a function of time (t).

Homans appears to employ the following postulates:

> . . . if the scheme of activities is changed, the scheme of interaction will, in general, change also, and *vice versa.*[31]
>
> . . . persons who interact frequently with one another tend to like one another.[32]
>
> If the interactions between the members of a group are frequent in the external system, sentiments of liking will grow up between them, and these sentiments will lead in turn to further interaction over and above the interactions of the external system.[33]
>
> . . . persons who feel sentiments of liking for one another will express those sentiments in activities over and above the activities of the external system, and these activities may further strengthen the sentiments of liking.[34]
>
> The more frequently persons interact with one another, the more alike in some respects both their activities and their sentiments tend to become.[35]

Simon took the postulates and devised equations in terms of the symbols discussed above. By writing the postulates as equations, he was able to state relationships in a very precise manner. When writing in prose form one can become careless, and relationships can be haphazard. This is not so in an equation. Homans' five statements were rewritten into three equations—the first algebraic and the second and third differential.[36]

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[31] From *The Human Group* by George C. Homans, copyright, 1950, by Harcourt, Brace and Company, Inc., and reprinted with their permission, p. 102.

[32] *Ibid.,* p. 111.

[33] *Ibid.,* p. 112.

[34] *Ibid.,* p. 118.

[35] *Ibid.,* p. 120.

[36] Simon, "Some Strategic Considerations in the Construction of Social Science Models," *op. cit.,* p. 408.

$$T = a_1 I + a_2 W$$

$$\frac{dI}{dt} = b\ (T - \beta I)$$

$$\frac{dW}{dt} = c_1\ (I - \gamma W) + c_2\ (F - W)$$

The first equation translates to: interaction (T) is produced by friendliness (I) and/or group activity (W). If both are present, there will be more interaction than if only one is present. The second equation translates to: friendliness will tend to increase if the amount of interaction is disproportionately large in relation to existing friendliness or will tend to decrease if the amount of interaction is disproportionately small in relation to existing friendliness. When an interaction (T) is equal to friendliness (I), the right-hand side of the equation would be zero, the factors being in adjustment, and there would be no tendency toward change. The third equation translates to: group activity will tend to increase as the level of friendliness is high, relative to the existing level of activity (the two being in equilibrium when $I = \gamma W$), and as the requirements of the external system are high, relative to the existing level of activity; otherwise group activity will tend to decrease.

The use of such mathematical models in handling material relevant to administration is a sign of future directions in theory building. Without a doubt, this is a direction which many will take in the future. At present, it is but a signpost.

Litchfield

Writing in the first issue of the *Administrative Science Quarterly,*[37] Litchfield proposed a series of working propositions which might lead to a global theory of administration. The assumptions stated by Litchfield included: administration has a set of constants or universals which hold regardless of what is administered; there is a need for better language (clearer concepts); there is a need for considering the role of variables in administration; and administration should draw upon all disciplines for information.

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[37] Edward H. Litchfield, "Notes on a General Theory of Administration," *Administrative Science Quarterly,* Vol. 1, No. 1 (June, 1956), pp. 3-29.

Litchfield offered several propositions which are here stated without elaboration:

First Major Proposition: The administrative process is a cycle of action which includes the following specific activities:

A. Decision-making
B. Programming
C. Communicating
D. Controlling
E. Reappraising

Minor Proposition: Decision-making may be rational, deliberative, discretionary, purposive, or it may be irrational, habitual, obligatory, random, or any combination thereof. In its rational, deliberative, discretionary, and purposive form, it is performed by means of the following subactivities:

a. Definition of the issue
b. Analysis of the existing situation
c. Calculation and delineation of alternatives
d. Deliberation
e. Choice

Minor Proposition: Decisions become guides to action after they have been interpreted in the form of specific programs.

Minor Proposition: The effectiveness of a programmed decision will vary with the extent to which it is communicated to those of whom action is required.

Minor Proposition: Action required by a programmed and communicated decision is more nearly assured if standards of performance are established and enforced.

Minor Proposition: Decisions are based on facts, assumptions, and values which are subject to change. To retain their validity, decisions must therefore be reviewed and revised as rapidly as change occurs.

Second Major Proposition: The administrative process functions in the areas of:

A. Policy
B. Resources
C. Execution

Minor Proposition: Action in each functional area is accomplished by means of the action cycle previously described.

Minor Proposition: Each function seeks a value which when realized is its contribution to the administrative process.

Minor Proposition: Each function has distinctive characteristics which govern the application of the cycle to it.

Minor Proposition: The functional areas of administration are integrally related to one another.

Third Major Proposition: The administrative process is carried on in the context of a larger action system, the dimensions of which are:

A. The administrative process
B. The individual performing the administrative process
C. The total enterprise within which the individual performs the process
D. The ecology within which the individual and the enterprise function.

Minor Proposition: While constant in basic structure, the administrative process will vary in important aspects, depending upon the personality of the person performing it.

Minor Proposition: While constant in basic structure, the administrative process will vary in important respects, depending upon the environment in which the individual and total enterprise function.

Minor Proposition: The types of relationships existing among the three dimensions other than the administrative have an effect upon the administrative process.

Fourth Major Proposition: Administration is the performance of the administrative process by an individual or a group in the context of an enterprise functioning in its environment.

Minor Proposition: Administration as a totality has definable attributes. They are:

a. It seeks to perpetuate itself.
b. It seeks to preserve its internal well-being.
c. It seeks to preserve itself vis-à-vis others.
d. It seeks growth.

Minor Proposition: The attributes of the totality of administration have significant effects upon administrative behavior.

Fifth Major Proposition: Administration and the administrative process occur in substantially the same generalized form in industrial, commercial, civil, educational, military, and hospital organizations.

One can see that this is indeed a broad look at administration. It appears, however, that this is essentially an elaboration of the framework presented by Simon. The administrative process of Litchfield is very similar to the decision-making process of Simon and of Griffiths as presented later in this book.

Barnard

The presentation of abstracts of administrative theories closes with a consideration of the work of Barnard. *The Functions of the Executive*[38] is a truly remarkable book. Written by a man who was an executive (at the time, President of the New Jersey Bell Telephone Company) and not an academically trained theorist this book contains more insights into the nature of administration than any produced before or since its publication. As one reviews present writing in administration, he is more inclined than ever to recommend that all students of the subject be advised to reread Barnard. Most, if not all, of the present theories in the market place have their genesis in Barnard. In his Chapter II, for example, is presented the individual and the organization, the basis for the Argyris-Bakke theory. Chapter IX discusses informal organizations and their relation to formal organization which is to be found in a number of theories. Although much energy has been expended in the study of decision-making the definitive study is still that of Barnard as presented in Chapter XIII.

It would be a lengthy task to state Barnard's theory of administration in detail; therefore the following excerpt summarizes the salient factors in *The Functions of the Executive:*[39]

1. Physical and biological factors are basic in cooperation; if these factors permit, then social factors are essential to secure it. Co-

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[38] Chester I. Barnard, *The Functions of the Executive* (Cambridge, Mass., Harvard University Press, 1938).

[39] Reprinted by permission of the publishers from Chester I. Barnard, *The Functions of the Executive* (Cambridge, Mass., Harvard University Press, copyright, 1938, by The President and Fellows of Harvard College), pp. 285-289.

operation, thus, may be called the process of synthesizing in action three quite different orders of factors.

2. From the point of view of organization, which is the chief instrument in economic development, all capital, whether of improvements, or machines, tools, and edifices, is always a part of the physical environment. The direct significance of capital is that it reduces the limitations imposed by the natural environment on cooperation. Its indirect result is the expansion of the incentives to cooperation.
3. All complex formal organizations grow from and consist of unit organizations, the inherent properties of which are the determining factors in the character of the complex.
4. The properties of unit formal organizations are determined by physical, biological, and social factors. The understanding of those factors and of the processes essential to conformation to them is the central method of the study of formal organizations.
5. The major structure of any society of substantial size is its complex of formal organizations, rather than its institutions, customs, etc., which are abstractions chiefly constructed on observed uniformities in the concrete acts, including the verbalizations, of such organizations as well as of individuals.
6. Informal organizations are found within all formal organizations, the latter being essential to order and consistency, the former to vitality. These are mutually reactive phases of cooperation, and they are mutually dependent.
7. Disturbances of the equilibrium of cooperative systems have come from false ideologies, particularly on the part of those who are leaders or executives in formal organizations. The effect of these false notions is to vitiate the sense of experience when consciously dealing with problems of the theory of organization, and to reinforce personal predilections, prejudices, and interests, as destructive factors, in the guidance of organization practice.
8. In this way arise four principal errors: an oversimplification of the economy of organization life; a disregard of the fact and of the necessity of informal organization; an inversion of emphasis upon the objective and the subjective aspects of authority; and a confusion of morality with responsibility.
9. The essential process of adaptation in organizations is decision, whereby the physical, biological, personal, and social factors of

the situation are selected for specific combination by volitional action.

10. Error of decision must be large because of the unbalance due to the difference in the precision of perception as respects the physical, the biological, and the social environments. This is a general factor limiting successful cooperation.

11. Since any cooperative system contains physical, personal, and social factors, at least three secondary abstract systems of utilities, related to these factors respectively, are pertinent. To these must be added a primary system of utilities related to the whole organization. Each of these secondary systems comprises the phenomena or factors of the respective classes, together with the utilities attached to them by the organization. The aggregate of these utilities in each system varies with the phenomena or factors and the utilities assigned to each factor. The primary system comprises the aggregate of these utilities and the phenomena and factors involved as a whole. These systems I have called economies. The respective economies are heterogeneous as between themselves, and widely variable as between the corresponding economies in other cooperative systems. They do not admit of quantitative comparison. These conceptions are on the whole new, and not now understood or adopted. They are theoretical and their use is limited at present to the analysis and description of cooperative systems. They are, however, intuitively taken into account in specific situations by those skilled in the executive arts and by others.

12. All scientific knowledge is expressed in languages and symbolic systems. These are socially developed with meanings that are socially determined; and all "finally" accepted observations of phenomena are cooperatively arrived at. Therefore, all sciences in the widest sense comprehend both social factors and others of different orders, depending upon their subject matter. Disregarding the social factors of science just stated, we find two kinds of abstract systems of knowledge other than those stated under 11, next above, as follows: (*a*) systems which relate exclusively, or substantially so, to one or the other order of factors (physical, biological, social), and (*b*) those which "cut across" or comprehend two or more orders of factors.

    a. Examples of systems of the first class are: the systems of physical science, containing many sub-systems, including everyday or commercial classifications of materials; biological systems; and purely theoretical social systems.

b. Examples of systems of the second class are: biochemical, architectural, engineering, and other technological systems; systems of psychology; economic systems; social, political, and ethical systems.

Abstract systems of the first class are basically scientific and are also practical. They do not attempt to explain cooperative phenomena. They involve few disadvantages except those of "misplaced concreteness" and an unbalanced approach to problems of cooperation. Abstract systems of the second class are often primarily practical and are also the subjects of scientific study. Some of these systems, especially those called "social," involve effects that often render them useless and even harmful through misstatement and false explanation of cooperative phenomena. In general they are developed without comprehension of the nature of cooperative systems, and accordingly their character and the limits of their usefulness are often misconceived.

13. An increasing degree of cooperation implies an increasing moral complexity. It is impossible for men to endure a high degree of moral complexity without commensurate technological proficiency.
14. The strategic factor in cooperation generally is leadership, which is the name for relatively high personal capacity for both technological attainments and moral complexity, combined with propensity for consistency in conformance to moral factors of the individual.
15. The strategic factor in the dynamic expression of leadership is moral creativeness, which precedes, but is in turn dependent upon, technological proficiency and the development of techniques in relation to it.
16. The strategic factor in social integration is the development and selection of leaders. The process is usually unbalanced by excessive emphasis either upon technological proficiency or upon moral status. In some ages moralities may have been cultivated in excess of the technological capacity to support them. In the present age the emphasis is upon technological proficiency which is not adequately guided by the necessities of the cooperative system as a whole.

THE PRESENT STATE OF ADMINISTRATIVE THEORY

After reviewing eight different attempts at theorizing in administration, what conclusions can be stated? What appears to be the state of affairs in administrative theory? If one could judge from the quantity of work which has appeared in the last two or three years, he would have to say that there is obvious vigor in the field. If, on the other hand, one were to look at results, he would have to say that the vigor has not resulted in a very abundant harvest. It is apparent, however, that this is a time of promise in administrative theory. There is more interest now than there has ever been. The prognosis is good.

Stage of Development

If one were to use a rubric for the classification of developmental stages of theory suggested by Thompson and described in Chapter 2, how would the preceding theoretical discussions be classified? As one might expect, they run the gamut. The author could not agree, however, that quality would correlate exactly with the progression in the suggested hierarchy of the rubric. In the accompanying table each study is placed according to the author's evaluation of its methodology. It can be seen that Barnard is placed in the category of "comments by practicing administrators"; yet it contains insights and formulations valuable to all other theoretical approaches.

Studies	*Comments and reports—practicing administrators*	*Survey research of teachers*	*Deductive reasoning of teachers*	*Adaptation of models—other disciplines*	*Models unique to administration*
Mort			X		
Sears			X		
SSCPEA		X			
Midwest Center				X	
Argyris-Bakke			X		
Simon			X		
Litchfield			X		
Barnard	X				

It should be noted that no unique models are contained in the eight surveyed. By far the largest number (five) are categorized as "deductive reasoning of teachers." One should not assume from this that all five are of equal quality, since the range here is also great. Only one, that of the Midwest Administration Center, is based on a model adopted from another discipline—in this instance the role model from sociology.

Problems

There are many problems with which the theorists are struggling. In most cases, the problems appear to be the same. Some seem to have overcome certain of the problems while others are still struggling with them.

Concept development. Probably the most common problem is that of language or, to be more precise, concept development. The problems vary widely from what might be called peculiarities of language to inadequacies of language. One end of the range is illustrated by Mort who uses his own language to present commonly accepted concepts. An example of this is Mort's principle of "simplicity" which is most often referred to by others as the "law of parsimony." The use of invented terms to discuss commonly accepted terminology does not add to understanding and communication. The most frequently observed inadequacy is the lack of operationism in the concepts being employed. For example, the "competency concept" cannot —or at least has not—been defined in terms of operations. This is somewhat true even in the Getzels formulation which has the most operational definitions to date. Although his concepts are more susceptible of measurement than previous concepts, "role expectations" and "need-dispositions" are difficult to obtain. The relationship between observed behavior and expectations and need-dispositions is an inferential one which cannot easily be verified.

Theory form. Theories seem to take one of two forms—molar or molecular. The theoretical formulation either attempts to be all inclusive or stresses a relatively narrow band of phenomena. Both are valuable, and the desired outcome in the now distant future is the all-inclusive theory; yet it would seem that attempts should be focused on what might be called "theories of the middle range." By this is meant that theory attempts should now concentrate on relating molecular theories to one another and aim toward something short of an all-inclusive theory.

Fruitfulness of theories. The ultimate value of any theory is its fruitfulness in the production of testable hypotheses. Many of the theories have produced no testable hypotheses—in fact, their very form precludes this possibility. Those which are value oriented (Mort, Sears, SSCPEA) are statements of what is "good," and the "good" is not testable. Even those which are "is" oriented have as yet not produced the hypotheses which were expected when the theories were developed. This generalization must be modified for each theory, as each has had considerable value for its author, and each has contributed to the total fund of knowledge in administration. The question is whether we are at a point in theory development where maximum fruitfulness is being realized from our theoretical efforts. The answer appears to be "no."

Need for precision. As one reads and works with present theories of administration, it is apparent that there is a need for greater precision in theory construction. This can be accomplished by more operational definitions, by more logical constructions, and by stating relationships in mathematical formulations. The first two are obvious statements, and the workers in theory have accepted this challenge. Little has been done to put theoretical derivations into mathematical formulations. The chief value of mathematics in social science theory is the gain obtained in precision. Few modern theories could stand the rigor of mathematical treatment.

SUMMARY

Eight theories of administration are presented: four from educational and four from noneducational administration. Mort and Ross's theory is based upon common-sense principles adjudicated in terms of a concept called "balanced judgment." Sears's theory is that the administrative function derives its nature from the nature of the services it directs. The theory formulated by the Southern States CPEA Center is based upon the competency concept. Getzels' work is used to present a theory developed at the Midwest CPEA Center. This theory describes administration as a social process in which behavior is conceived as a function of both the nomothetic and idiographic dimensions of the social system.

Noneducational administration theories are introduced by a summary of the work of Argyris and Bakke whose most important assumption is that the developmental processes and goals of the individual and his organization are, at crucial points, fundamentally different and antagonistic. Simon offers some leads to a theory of administration based upon increasing the rationality of organizational decisions. Some of Simon's work with certain of Homans' postulates are also discussed. Litchfield's assumptions are aimed at global theory and state that: administration has a set of constants or universals which hold regardless of what is administered; there is a need for better language; there is a need for considering the role of variables in administration; and administration should draw upon all disciplines for information. Most of the modern theories were anticipated in the work of Barnard whose assumptions and postulates are presented.

Theory builders are struggling with problems of concept development, theory form, lack of testable hypotheses, and lack of precision.

4

Administration as Decision-Making

At this point we have discussed what theory is and is not, what its values are, and the attempts, to date, at theorizing. The remainder of the book is devoted to a presentation and discussion of a theory of administration. There is, of course, no intention of creating the impression that this is a theory in its final form; rather, it is a statement which is offered for criticism and improvement. Theories are made to be superseded, and this one is no exception.

With this in mind, the purpose of Chapter 4 is to state assumptions which constitute the theory, develop certain relevant concepts, and present a set of propositions. Chapter 5 is devoted to an elaboration of certain aspects of the theory and the implications of the theory.

STATEMENT OF A THEORY OF ADMINISTRATION

It was stated in Chapter 2 that the use of the term *theory* would be restricted to that meaning assigned to it by Feigl, namely: "a set of assumptions from which can be derived by purely logico-mathematical procedures a larger set of empirical laws." The assumptions should be of such a character as to explain fully and completely the nature of the phenomenon under consideration, in this case, administration. The exposition of this theory takes the form of a declarative statement of each assumption followed by a brief explanation.

1. *Administration is a generalized type of behavior to be found in all human organizations.*

Administration is a term used to describe an aspect of life in a social organization. Since there is no aspect of living unrelated to a social organization, administration is an integral part of all human life. A logical deduction from this assumption is that the adjectival varieties of administration are more alike than different. This means that there must be a departure from the over-concern in the field of educational administration with the adjective. Not only have we been concerned almost exclusively with the adjective *educational*, but we have been spending our time looking at, for instance, the field of secondary school administration and saying that it differs substantially from elementary school administration. This is carried even farther in that a separation is created within secondary education. For example, it is not at all uncommon to separate the teaching of the administration of health and physical education programs from that of other high school departments, such as English or mathematics, to say nothing of the complete separation of vocational administrators from all other educators. If the difference between educational and public administration, for instance, can be termed *adjectival,* then the difference between secondary and elementary educational administration can be called *subadjectival.* When one starts to compare the content of these various areas of administration, one finds almost complete duplication. In a study carried out at a large university, the dean reported that there were ten different departments teaching various varieties of educational administration, and they duplicated each others' offerings to the extent of 90 per cent. In all probability the same situation exists at most other universities.

No strong case can be made for the *exclusive* study of adjectival administration, and no case at all can be made for the exclusive study of subadjectival administration! With this assumption we shall proceed to talk about administration using particular fields for illustrative purposes. There will, however, be no attempt made to indicate that any particular thesis is drawn exclusively from any one adjectival area of administration.

2. *Administration is the process of directing and controlling life in a social organization.*

This assumption means that administration is the implementation of the purposes for which an organization is designed through such procedures as establishing criteria for the performance of individuals as they live in the organization and establishing controls to make certain that performance agrees with plans. Administration is not an artificial function superimposed on the normal activities of human beings; it is rather the process (cycle of events) engaged in by the members of a social organization in order to control and direct the activities of the members within the organization. Administration occurs whenever the life processes of an organization are being controlled. In contrast to this, it can be said that administration is not the production of the organization. Barnard indicated this quite clearly when he said, "Executive work is not that *of* the organization, but the specialized work of *maintaining* the organization in operation."[1] This leads into the next assumption.

3. *The specific function of administration is to develop and regulate the decision-making process in the most effective manner possible.*

It is sometimes assumed that the function of the chief executive officer is to *make* decisions, generally by himself because others are incompetent. This is not the basic assumption of this theory; rather it is the assumption that it is the function of the executive to see to it that the decision process proceeds in an effective manner. (An effective manner is one which results in the accomplishment of a stated objective.) In fact, the executive is called upon to make decisions only when the organization fails to make its own decisions. To put this into other words, if the executive is personally making decisions this means that there exists malfunctioning in the decision process. The executive then needs to correct the malfunctioning. Barnard was referring to this point when he said:[2] "It is the organization, not the executive, which does the work on the external environment. The executive is primarily concerned with decisions which facilitate or hinder in the effective or efficient operation of the organization."

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[1] Chester I. Barnard, *The Functions of the Executive* (Cambridge, Mass., Harvard University Press, 1938), p. 215.

[2] *Ibid.,* p. 211.

4. The administrator works with groups or with individuals with a group referrent, not with individuals as such.

An administrator interacts with others in the organization primarily in terms of the *group* to which others belong. The school administrator's perception of X is of a member of a teaching group, rather than Miss X as a unique individual. The same is true of his perception of other administrators in the organization. Subordinates rebel against this perception of the administrator, and the rebellion has taken the form of strong unions in industry and the strengthening of teachers' organizations in education. The interesting point is that the worker joins the union to develop "self" but rather quickly finds that he is perceived the same way in the union as he is in industry. This, no doubt, is one of the major reasons why unions are now having the same organizational problems that management is having.

The administrator perceives others in the same way; for instance, he regards board members as members of the board of education rather than as individuals. Officers of the Parent-Teacher Association change each year; yet the perception of the officers remains much the same from year to year. In other words, administrators are oriented to groups, not individuals.

CONCEPT DEVELOPMENT

In order to work with the assumptions stated above, it is necessary to have a set of working tools or concepts. As indicated in Chapter 2, the concepts must be relevant to the theory, must be stated clearly, must be used wherever the same idea is being discussed, and must be operational. Their meanings must correspond to empirically observable facts or situations. The concepts actually provide the building blocks of the theory, and the theory can be no stronger than its concepts.

Decision-Making

The key concept in this discussion is that of directing and controlling the decision-making process. It is not only central in the sense that it is more important than other functions, as some writers have indicated; it is also central in that *all* other functions of administration can best be interpreted in terms of the decision-making process. Decision-making is becoming generally recognized as the heart of organization and the process of administration. McCammy states this clearly and concisely: "The making of decisions is at the very center of the process of administration, and the discussion of administration will be more systematic if we accept a framework for the analysis of decision-making."[3] Simon caps his argument on this line by stating: "A general theory of administration must include principles of organization that will insure correct decision-making, just as it must include principles that will insure effective action."[4] Livingston, using the term *management* as *administration* is used in this paper, states:[5]

> If we expand the concept of decision-making to include, on the one hand, the process by which the decision is arrived at, and on the other hand, to include the process by which we implement or make the decision "work," and if we further recognize that this is a continuing, dynamic process rather than an occasional event, then decisioning means something quite different than heretofore and becomes the basis of all managerial action.

Such a statement calls for an explanation of the concept of decision and a clarification of the extent and content of the decision-making process.

One approach to a definition is to employ the one used by the dictionary. In this case we have: "A settling or terminating, as of a controversy, by giving judgment on the matter; also, a conclusion arrived at after consideration." It can be seen that a decision is essentially a judicial proceeding—that is, a state of affairs is present, and a judgment is made concerning it. The judgment is such as to influence action which results from the decision. Action is implicit in a decision. The judgment is made so that a course of action will be influenced.

Decisions are closely interrelated with action. A decision may alter the present course of such action, that is, change the direction of action to a noticeable degree. A decision may adjust a present course of action, merely correct it; or a decision may be made to permit the present course of action to continue.

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[3] James L. McCammy, "Analysis of the Process of Decision Making," *Public Administration Review*, Vol. 7, No. 1 (1947), p. 41.

[4] Herbert A. Simon, *Administrative Behavior* (New York, Macmillan, 1950), p. 1.

[5] Robert Teviot Livingston, "The Theory of Organization and Management," *Transactions of the ASME* (May, 1953), p. 659.

Decisions are totally pragmatic in nature—that is, the value of a decision is dependent upon the success of the action which follows it. Since all rational action is in terms of goals, the value of a decision is related to the degree to which the goals are attained.

In the dictionary definition above there is the implication that a decision is a time consuming matter. It is explicit that a decision follows a period of consideration. It is possible for the period of time to be minimal and consideration to be of a fleeting nature. A decision does not, by its nature, have to be a long and painful process. In fact, if a state of affairs is judged very quickly and with little deliberate thought, what would it then be called? The term *decision* is to be applied to all *judgments which affect a course of action.*

The concept *decision-making process* is therefore construed to mean not only the decision but also the acts necessary to put the decision into operation and so actually affect the course of action of an enterprise.

Sequential decisions. Practically every decision is one of a series. That is to say, practically every decision is one of a *sequence.* It is almost impossible to determine which decision on a certain state of affairs was the original decision. Furthermore, it is almost impossible to determine which decision of all those made is a unique one. Each decision made appears to tie into another decision reached previously. From this we note the sequential and interrelated nature of decision. This is a deviation from the dictionary or commonly accepted definition in that a decision rarely terminates or settles a controversy; it alters, changes its direction, or sometimes prolongs it.

Probably the clearest illustration of sequential decision-making is found in the law. The essence of the judicial process is found in the *precedent.* Each decision is based upon one or more previous decisions. Only the introduction of new knowledge of tremendous impact will cause a change in the direction which the sequence of decisions takes. The sequence of judicial decisions is of such a pronounced nature as to warrant being characterized as the "seamless web of the law."

All organization is built around a system of sequential decisions. Those who effect the decisions are functioning as administrators.

Organization

All administration takes place within the context of an organization. In the discussion of administration, organization is subsumed. It is a vitally important subtopic under the subject of administration as administration is concerned with the control and direction of living in a social organization. What is meant by organization? First, we shall recognize that we are concerned primarily with two types of organization, the *formal* and the *informal*, and incidentally with a third type which is neither.

Formal organization is construed to mean an ensemble of individuals who perform distinct but interrelated and coordinated functions in order that one or more tasks can be completed. Thus, we have the business organization, the governmental bureau, the hospital, the public school. In each type of organization the task is more or less clearly understood by the general public. It is obvious that organizations result, in part at least, as a consequence of division of labor in society. It then follows that any *one* organization functions as part of a larger social system. The task of the organization must have value for the larger social system if that system is to tolerate the organization's development.

Why is it that organizations take the form they do? Why do separate organizations have so much in common? Why, on the other hand, are there differences among organizations? Parsons gives us the insight which might answer these questions:[6]

> In its internal reference, the primacy of goal-attainment among the functions of a social system gives priority to those processes most directly involved with the success or failure of goal oriented endeavors. *This means essentially the decision-making process* [italics

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[6] Talcott Parsons, "Suggestions for a Sociological Approach to the Theory of Organizations—I," *Administrative Science Quarterly*, Vol. 1, No. 1 (June, 1956), p. 66.

> are the author's], which controls the utilization of the resources of the system as a whole in the interest of the goal, and the processes by which those responsible for such decisions can count on the mobilization of those resources in the interest of a goal. These mechanisms of mobilization constitute what we ordinarily think of as the development of power in a political sense.

Organizations take their common form from the decision-making process, and their differences occur in the modifications of the process as required by their task and the way in which the public perceives the task. As one example, the monolithic nature of the military organization is determined by the narrow task and the absolute necessity for unidimensional decision-making. There is no time for argument in the heat of battle. In hospitals we observe two lines of decision-making, one professional through the doctors, the other semiprofessional through the hospital administrator or manager. The *need* for two types of decisions gives form to the kind of hospital organization which we now have. In the public schools the decision-making process is almost wholly prescribed by state legislatures and arises largely out of prudential considerations. A business organization does not differ *primarily* from a school organization in that one is a profit-making organization and the other is not; the difference resides in dissimilarities in the decision-making process. This is a difference of *substance,* not *form.*

Let us note how the issues in organization can be resolved on the basis of a decision-centered theory. For instance, should an organization be tall or flat? This issue should be decided on the basis of what one believes concerning decision-making. If one wants decisions made on a decentralized basis, made by those close to the problems, then a flat organization is built. If one wants decisions made on a highly centralized basis then a tall organization is imperative.

The span of control issue can be resolved in much the same fashion. Instead of asking the question, "How many persons should report to the administrator?" we should ask, "Who is responsible for what kind of decisions?" Structure should be related to the decision-making process, not to the number of human relationships which a mathematician believes an administrator can remember.[7] A small span of control is no doubt necessary in the military where the general staff makes decisions of a far-reaching nature affecting the actions of all in its command. The general himself needs greater control over the decisions made by subordinates in order to mobilize all of the organization's resources toward a narrow objective. In a university, the professor makes many decisions for himself which in the military would be made for him. The soldier is told what type of uniform is to be worn during each hour of the day. If, for instance, it appears to the soldier that it might rain, he does not have to decide whether to wear a raincoat—he merely waits until he hears the uniform of the day announced over the loud speaker. On the other hand, the professor makes practically all decisions as regards his clothing, hours of work (outside assigned teaching hours), and similar concerns. He also decides by himself what references to use, what to teach, and how to teach it. The soldier has no choice as to what he does—the professor, almost complete choice. This difference in choice is reflected in the organization of each institution. Many more professors report to a dean than soldiers report to a military officer because of the difference in the nature and number of decisions made by each administrator in controlling the decisions made by others.

A rather obvious use of the concept that organizations are built in terms of the way in which decisions are to be made is in determining the degree of decentralization existing in an institution. In discussing this point Dale says:[8]

> We may say that the degree of managerial decentralization in a company is the greater:
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> 1. The greater the number of decisions made lower down the management hierarchy.
> 2. The more important the decisions made lower down the management hierarchy. For example, the greater the sum of

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[7] V. A. Graicunas, "Relationship in Organization," in Luther Gulick and Lyndall Urwick, eds., *Papers on the Science of Administration* (New York, Institute of Public Administration, 1937), pp. 183-187.

[8] Ernest Dale, *Planning and Developing the Company Organization Structure* (New York, American Management Association, 1952), p. 107.

capital expenditure that can be approved by the plant manager without consulting anyone else, the greater the degree of decentralization in this field.

3. The more functions affected by decisions made at lower levels. Thus companies which permit only operational decisions to be made at separate branch plants are less decentralized than those which also permit financial and personal decisions at branch plants.
4. The less checking required on the decision. Decentralization is greatest when no check at all must be made; less when superiors have to be informed of the decision after it has been made; still less if superiors have to be consulted *before* the decision is made. The fewer people to be consulted, and the lower they are on the management hierarchy, the greater the degree of decentralization.

This is a clear example of the use of decision-making in the analysis of an organization after it has been in existence. The organization could be built in accordance with convictions as to how decisions should be made, and no doubt, many are built in just this manner, as witness General Electric, General Motors, and Sears, Roebuck.

An understanding of the decision-making process in a particular enterprise is the key to its organizational structure.

An *informal organization* is present in every formal organization and is the system of interpersonal relations which forms to affect decisions made in the formal organization. This informal system is omitted from the formal scheme or is in opposition to it. The informal organization is a dynamic structure composed of special interest groups. In the past, the concept has been that of constant change—the informal structure being subject to continual revision as new decisions face the formal organization. For example, Barnard states:[9]

> informal organization is indefinite and rather structureless, and has no definite subdivision. It may be regarded as a shapeless mass of

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[9] Reprinted by permission of the publishers from Chester I. Barnard, *The Functions of the Executive* (Cambridge, Mass., Harvard University Press, copyright, 1938, by The President and Fellows of Harvard College), p. 115.

> quite varied densities, the variation in density being a result of external factors affecting the closeness of people geographically or of formal purposes which bring them specially into contact for conscious joint accomplishments. These areas of special density, I call informal organizations, as distinguished from societal or general organizations in their informal aspects. Thus there is an informal organization of a community, of a state. For our purposes, it is important that there are informal organizations related to formal organizations everywhere.

Much the same pattern of informal groupings has been found in the political scene and has been described by Ernest S. Griffith:[10]

> One cannot live in Washington for long without being conscious that it has there whirlpools or centers of activity focusing on particular problems. . . . There is nothing really mysterious about this sort of government. It is essentially "of men" and these men behave very naturally. "Who says what to whom and what is the reaction?" This question, if we could obtain enough answers, would capture the spirit, the genius of our own or any other government. It is my opinion that ordinarily the relationship among these men—legislators, administrators, lobbyists, scholars—who are interested in a common problem—is a much more real relationship than the relationship between congressmen generally or between administrators generally. In other words, he who would understand the prevailing pattern of our present government behavior, instead of studying the formal institutions or even generalizations in the relationships between these institutions or organs, important though all these are, may possibly obtain a better picture of the way things really happen if he would study these "whirlpools" of special social interest and problems.

One can think of these areas of "density" or the "whirlpools" as being in constant change as in the nebulae. The decisions constitute the external force which brings the change.

Two recent studies in different types of school systems would lead us to believe that the informal structure has more permanency than Barnard suggests.[11] It now appears that there are groupings among teachers which maintain themselves over a long period of time. They have typical characteristics of small groups and generally form with at least one strong bond.[12] Thus far, it has been found that the dominant variables in the formation of groups are those of propinquity of teaching station, age, and length of service. A minor variable is that of religion. It appears that the informal groups may be either of a passing nature or of a permanent nature. *They all have in common, however, the altering of the decision-making process of the formal organization.*[13]

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[10] Ernest S. Griffith, *The Impasse of Democracy* (New York, Harrison-Hilton, 1939), p. 182.

[11] Reported in Daniel E. Griffiths, David L. Clark, D. Richard Wynn, and Laurence Iannaccone, *Modern Organizational Theory and Practice* (Danville, Ill., Interstate, in press), Part IV.

There are, in all formal organizations, groups which are formed for reasons other than affecting decisions. These are *ad hoc* coffee groups and other types of groups whose purpose is singly social. These social groups, however, contain the material from which informal groups sometimes develop. Since this set of groups does not concern itself with the purposes of the organization, it will not be discussed further.

Perception

Observation of administrators functioning in concrete situations leads one to speculate concerning what they "see" in these situations and in the world around them. Perception is defined in the dictionary as "awareness of objects; consciousness" and is generally concerned with that which interests us. However, there is more to perception than mere awareness. We find it helpful to consider perception from the frame of reference of a recent study which uses what is called the *transactional approach.*[14]

In working toward a definition of perception, this study presents the major characteristics of perception, the central problem and ways of studying the phenomena. According to

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[12] For a further discussion of the structure of groups see Daniel E. Griffiths, *Human Relations in School Administration* (New York, Appleton-Century-Crofts, 1956), Chapter 8:

[13] For a thorough discussion of the theoretical justification for this statement see Conrad M. Arensberg, "Behavior and Organization; Industrial Studies," in John H. Rohrer and Muzafer Sherif, eds., *Social Psychology at the Crossroads* (New York, Harper, 1951), Chapter XIV.

[14] William H. Ittelson and Hadley Cantril, *Perception* (New York, Random House, 1954).

Ittelson and Cantril the three major characteristics of human perception are:

1. Perception can be studied only in terms of *transactions*, that is concrete individuals dealing with concrete situations.
2. Perception comes into the transaction from the unique *personal behavioral center* of the perceiver.
3. Perception occurs as the perceiver creates his own psychological environment by identifying certain aspects of his own experience to an environment which he believes exists independent of his own experience. This is called *externalization*.

Since the concept most difficult to understand is that of *transaction*, it would be well to consider it for a moment. Ordinarily the term *interaction* is used to describe what goes on between an individual and his environment. We say, "Man interacts with his environment and brings about a desired change." This assumes that "man" and his "environment" exist as independent entities and that when they interact they do so without affecting their own identities. The concept of *transaction* uses the content of the interaction as the subject matter to be discussed.[15] Ittelson and Cantril state:[16]

> Neither a perception nor an object-as-perceived exists independent of the total life situation of which both perception and object are a part. It is meaningless to speak of either as existing apart from the situation in which it is encountered. The word *transaction* is used to label such a situation. For the word transaction carries the double implication, (1) that all parts of the situation enter into it as active participants, and (2) that they owe their very existence as encountered in the situation to this fact of active participation and do not appear as already existing entities merely interacting with each other without affecting their own identity.

The concept of the *personal behavior center* has as its meaning the fact that the person enters into a transaction from his own unique position. He is somewhat different from all others in the transaction. We say, then, that each person enters a transaction from his own unique personal behavior center. To the extent that his perception is common with others we have social activity.

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[15] A more complete discussion of this concept is to be found in John Dewey and Arthur F. Bentley, *Knowing and the Known* (Boston, Beacon Press, 1949).

[16] Ittelson and Cantril, *op. cit.*, p. 3.

The concept of externalization is of recent historical origin. Early studies in perception were concerned with what the environment did to the individual. The Greeks started this chain of thought by formulating the concept that objects emitted small replicas of themselves which were received by the perceiver. The fact that different viewers received different replicas did not bother them to any great extent. Recently, there has been interest in what the organism does when it perceives. The concept of externalization describes, but does not explain, how we perceive. It states that when we perceive anything, we consider it as external to ourselves. As Ittelson and Cantril say, "When we perceive, we externalize certain aspects of our experience and thereby create for ourselves our own world of things and people, of sights and sounds, of tastes and touches."[17]

The concept of transaction is basic to the concepts of the personal behavior center and externalization. It can be seen readily that each situation will be perceived differently by different individuals and that each individual will assume to be real that which he perceives. He then acts accordingly. This has been neatly summarized as follows:[18]

> The three major characteristics of perception can be summarized by saying that perceiving is that part of the process of living by which each one of us, from his own particular point of view, creates for himself the world within which he has his life's experiences and through which he strives to gain his satisfactions.

The relevance of this set of concepts to decision-making will be explored in more detail in Chapter 5.

Communication

A close relationship exists between communication and perception in that perception sets the limits within which communication is possible. Each of us creates the world within which we live. By so doing we (with the help of others) set up the conditions under which it is possible to communicate with others, or to have others communicate with us. A recent study by Cherry gives new insights to the administrative theoretician. In an introductory essay entitled "Communication and Organization" he points out:[19]

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[17] *Ibid.*, p. 5.

[18] *Ibid.*, p. 5. For a detailed discussion of perception and its relation to administration see Daniel E. Griffiths, *Human Relations in School Administration, op. cit.*, Chapter 3.

> When "members" or "elements" are in communication with one another, they are associating, cooperating, forming an "organization," or sometimes an "organism." Communication is a social function. That old cliche, "a whole is more than the sum of its parts," expresses a truth; the whole, the organization or organism, possesses a structure which is describable as a set of *rules,* and this structure, the rules, may remain unchanged as the individual members or elements are changed. By the possession of this structure the whole organization may be better adapted or better fitted for some goal-seeking activity. Communication means *sharing* of elements of behavior, or modes of life, by the existence of sets of rules.

The elements of behavior or modes of life can only be shared by those who can perceive common stimuli in a common manner. In order, then, for communication to exist in an organization and between the organization and the outside, common perceptual bases must be established; that is, there must exist the set of rules referred to by Cherry. It is clear that, if decisions are to be made and put into operation, there must be cooperation and coordination of the activities of many individuals. Communication is the process by which cooperation and coordination take place.

Power

As people live within the framework of an organization, it is observed that their lives are ordered in various ways. They are moved to behave in one manner or another, and it is necessary to explain the various resultant types of behavior. Certainly one promising lead is offered by the way in which one perceives the situation in which he is placed, but there are others. The first of these is the concept of *power*. To many, the concept of power holds first place in a theory of organization. For instance, Parsons states: "Subject to the over-all control of an institutionalized value system in the society and its subsystems, the central phenomenon of organization is the mobilization of *power* for the attainment of the goals of the organization.[20]

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[19] Colin Cherry, *On Human Communication* (published jointly by John Wiley & Sons, Inc., and the Technology Press, copyrighted, 1957, by the Massachusetts Institute of Technology), p. 6.

The concept of power helps to account for the control which an organization holds over those who are within it. We note that society has an ordered procedure for teaching its young. The relationship between the teacher and the young is an ordered one; it is institutionalized. Underlying the ordering of these interactions of teacher and student is power. Bierstadt states this idea of power very well: "Power supports the fundamental order of society and the social organization within it, wherever there is order. Power stands behind every association and sustains its structure. Without power there is no organization, and without power there is no order."[21]

In a definition of power which has had general acceptance, Hunter states: "Power is a word that will be used to describe the acts of men going about the business of moving other men to act in relation to themselves or in relation to organic or inorganic things."[22] We do not regard power as the central concept in a theory of administration in that there appears to be a question as to *why* power is exercised. While there appears to be some evidence that power is sought for the sake of power[23] there appears to be a more rational answer. Power is sought in order to control the decision-making process in the organization. This is clearly apparent in the business and political world, but it is less apparent in the public school or the university. It is, however, no less present.

It would appear that power can be operationally defined only in terms of the decisions which a power-holder actually makes. Thus power is a function of *decisions made* and can be operationally defined as:

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[20] Talcott Parsons, "Suggestions for a Sociological Approach to the Theory of Organizations—II," *Administrative Science Quarterly*, Vol. 1, No. 2 (September, 1956), p. 225.

[21] Robert Bierstadt, "An Analysis of Social Power," *American Sociological Review*, Vol. 15 (December, 1950), pp. 730-736.

[22] Floyd Hunter, *Community Power Structure* (Chapel Hill, University of North Carolina Press, 1953), pp. 2-3.

[23] Alfred McClung Lee, "Power-Seekers," in Alvin W. Gouldner, ed., *Studies in Leadership* (New York, Harper, 1950), pp. 667-678.

$$P = f(D)$$

A person, therefore, has power to the extent that he makes decisions which:

1. Affect the course of action of an enterprise to a greater degree than do decisions made by others in the enterprise.
2. Influence other decisions.

Thus it can be seen that the one who exercises most control over the decision-making process in an organization has the most power.

In studying an organization the power distribution can be determined by counting the number of decisions made, by noting the extent to which the decisions affect the course of action of the enterprise, and by noting the effect of any one decision on subsequent decisions. Control of the decision-making process is in turn the key to greater power—that is, control means the right to make decisions which provide the criteria for those who make the other decisions in the sequential process.

Authority

In continuing our analysis of administration to determine relevant concepts, we find that a consideration of power leads us to the concept of *authority*. Although many writers use the terms *power* and *authority* interchangeably, there is a distinct difference between the terms. Simon has used the definition of authority which states that *authority* may be defined as the power to make decisions which guide the actions of others.[24] In discussing this concept, he points out that in every authority situation there is a superior and subordinate. The superior frames decisions and anticipates that they will be followed "The subordinate expects such decisions, and his conduct is determined by them."[25] A formal operational definition of the concept is that of Simon, "a subordinate may be said to accept authority whenever he permits his behavior to be guided by a decision reached by another, irrespective of his own judgment as to the merits of that decision."[26]

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[24] Simon, *op. cit.*, p. 125.
[25] *Ibid.*, p. 125.

The crucial point here is that authority is the willingness of some to accept the power of another. That is, members of the organization acknowledge the legitimacy of the decisions made by some to control the decisions of others. When this concept is put into practice it helps to clean the fuzziness out of some of the concepts currently in use. Take for example, line and staff. It is generally understood that the line gives "orders" and the staff gives "advice" as Thompson puts it so well:[27]

> Now we all know the difference between orders and advice. Or do we? When a staff assistant to my boss indicates that I am doing something inefficiently, have I received advice or an order? In many cases, I am convinced, advice has been given (or intended), but orders have been received (or perceived). The line-staff distinction is common sense to a great many administrators, but, in my opinion, it has seriously interfered with the development of administrative theory.

The vital process in an organization is the making of decisions, not the giving of orders or advice. If *A* perceives *B* as one who may legitimately make decisions which establish the criteria for the decisions which *A* makes, then *B* has authority over *A* regardless of whether he is called "line" or "staff."

A SET OF PROPOSITIONS

The most fruitful consequences of theory building are the testable propositions which result. What are the propositions which can be derived from the assumptions and concepts of the theory described in this chapter? Below is a set of propositions, some designated as major, with subpropositions called minor, others called converse. It is presumed that this section will indicate some of the research needed in administration as well as the direction the research should take. Some of this research is now under way. One of the major studies which is concerned in part with the following propositions is the Development of Criteria of Success in School Administration, a major research effort financed by the U.S. Office of Education Cooperative Research Program and sponsored by the University Council for Educational Administration and the Educational Testing Service.

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[26] *Ibid.*, p. 22.

[27] James D. Thompson, "Modern Approaches to Theory in Administration," in Andrew W. Halpin, ed., *Administrative Theory in Education* (Chicago, Midwest Administration Center, 1958), p. 30.

Major proposition. The structure of an organization is determined by the nature of its decision-making process. The issues of organizational structure such as "span of control" can be resolved if viewed as the outgrowth of a particular type of decision-making process.

> *Minor proposition.* An individual's rank in an organizational structure is directly related to the degree of control he exerts over the decision process. Another way of saying this is that the individual who makes the decisions which establish the criteria by which others make decisions has highest rank in an organization.
>
> *Minor proposition.* The effectiveness of a chief executive is inversely proportional to the number of decisions which he must personally make concerning the affairs of the organization. It is not the function of the chief executive to make decisions; it is his function to monitor the decision-making process to make certain that it performs at the optimum level.
>
> This proposition may be expressed mathematically as follows:

$$E(t) = \frac{1}{\Sigma D(t)}$$

In this formula E is effectiveness in achieving the stated objectives of the organization; t is a specific time interval; and ΣD is the sum total of the number of decisions made in t, the specific time interval.

> *Minor proposition.* Differences in the organizational structure of military, industrial, educational, business, and public administration institutions are related to differences in decision-

making processes rather than such conventional concepts as private enterprise.

Major proposition. If the formal and informal organization approach congruency, then the total organization will approach maximum achievement. By "approaching congruency" is meant that the formal and informal organizations must perceive the task of the organization as being the same for both, and both must behave in much the same way to carry out the task. In all probability congruency could never be attained; in fact, it would be undesirable if it ever were attained since there would then exist a state of balance in which there would be no progress.

Converse proposition. If the total organization is not approaching maximum achievement, then, in all probability, the formal and informal organizations are divergent. This proposition suggests that the major reason for failure to achieve at a maximum level is the divergency of perceptions and resultant behaviors between the formal and informal organizations.

Minor proposition. There exists an optimum divergency between the formal and informal structures. This proposition suggests that in organizations which produce at a maximum level there is a difference in how each structure perceives the task of the total organization and in resultant behavior. In other words, the two cannot be so far apart in their perceptions as to be striving for different goals, nor so close together that there is no conflict in perception.

Minor proposition. If there is no conflict between formal and informal structures in the perception of the task of the organization, the organization will not achieve at a maximum level. This proposition takes into account the fact that both structures exist to achieve legitimate purposes for their members and that, if the task is perceived without conflict, the purposes of the two structures are imperfectly formulated.

Major proposition. If the administrator confines his behavior to making decisions on the decision-making process rather than making terminal decisions for the organization, his behavior will be more acceptable to his subordinates.

Major proposition. If the administrator perceives himself as the controller of the decision-making process, rather than the maker of the organization's decisions, the decisions will be more effective.

SUMMARY

Four basic assumptions of a theory of administration as decision-making are presented: (1) Administration is a generalized type of behavior to be found in all human organizations. (2) Administration is the process of directing and controlling life in a social organization. (3) The specific function of administration is to develop and regulate the decision-making process in the most effective manner possible. (4) The administrator works with groups or with individuals with a group referrent, not with individuals as such.

A set of concepts is presented and includes decision-making, organization, perception, communication, power, and authority. The chapter concludes with a set of propositions.

5

The Decision-Making Process

Because the decision-making process is the central process in administration, a rather complete description of the process is undertaken in this chapter.[1] The assumptions and concepts developed in Chapter 4 are here incorporated into the description of how the process works. No attempt will be made to indicate how the process "ought" to work, no apologies will be made for apparent shortcomings. The approach in this chapter is that of synthesis. The factors which most clearly describe the process have been culled out of the large number of studies of how decisions are made. The rationale for culling is the theory presented in Chapter 4.

A process is a cycle of events in which a consistent quality or direction can be discerned. It can be seen that in describing a process there is a certain amount of inference necessary. As one perceives a number of events within a set of explicit assumptions, it is possible to observe a direction in the events. The decision-making process in an organization is not a personal matter, and its effectiveness is not a product of the quality of decisions of any one person. The decision process is an organization matter, and the criterion by which an organization may be evaluated is the quality of the decisions which the organization makes plus the efficiency with which it puts the decisions into effect. While one must certainly look at the behavior of the administrator, only the behavior of the administrator as it relates to the decision process is of any consequence in evaluating the worth of an organization. In other words, the behavior of the administrator cannot be equated with the organization's products; but the behavior as it affects the making and putting into operation of organizational decisions can be related to the worth of the organization. Certainly it would be most difficult to relate an administrator's specific behavior with the total outcome of a school system, but it is not at all difficult to relate the kind of decisions made over a period of time to the effectiveness of a school system.

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[1] Much of the material in this chapter appeared in Daniel E. Griffiths, "Administration as Decision-Making," in Andrew W. Halpin, ed., *Administrative Theory in Education* (Chicago, Midwest Center, 1958).

The administrative decisions are those which establish criteria by which others in the organization make their decisions. In the words of the engineer, an administrator is a type of servo mechanism, establishing the limits within which function is controlled. For example, a teacher committee is empowered to select a new textbook for Algebra I, but the principal sets certain criteria as to cost, amount of time the committee can work, and the like. The committee then makes a decision which is in the bounds established by administrative decisions. The quality of the committee's decision is largely determined by the administrator's decisions.

THE PROCESS

There is a great, almost universal, belief that decisions of all kinds are made by going through a succession of X number of steps, usually five or six depending upon the writer. These steps are considered to be almost mechanical in nature, and the assumption is that if several people proceed through these steps, seeking the solution to a specific problem, they will each arrive at the same conclusion. That this is asking a great deal of any set of steps is unquestioned; yet it would appear that this is an underlying assumption of many. A more reasoned approach is needed and is here attempted. Simon points the direction of this inquiry: "Two persons, given the same possible alternatives, the same values, the same knowledge, can rationally reach only the same decision."[2] Note the tremendous restrictions placed upon the decision-makers. Not only are the alternatives restricted, but also the values and knowledge of the decision-maker. In addition, Simon does not rule out the possibility that a person can make an irrational decision. The limits of rationality are great in and of themselves, as Simon states:[3]

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[2] Herbert Simon, *Administrative Behavior* (New York, Macmillan, 1950), p. 241.

> when the limits to rationality are viewed from the individual's standpoint, they fall into three categories: he is limited by his unconscious skills, habits, and reflexes; he is limited by his values and conceptions of purpose, which may diverge from the organization goals; he is limited by the extent of his knowledge and information. The individual can be rational in terms of the organization's goals only to the extent that he is *able* to pursue a particular course of action, he has a correct conception of the *goal* of the action, and he is correctly *informed* about the conditions surrounding his action. Within the boundaries laid down by these factors his choices are rational—goal-oriented.

If it could be conceived as possible that two persons were alike as regards all of the above variables, then it is entirely possible that the same decision would be made by each on any given problem.

STEPS IN DECISION-MAKING

In practically any discussion of the process of decision-making, steps similar to the following will be presented and described:

1. Recognize, define, and limit the problem.
2. Analyze and evaluate the problem.
3. Establish criteria or standards by which solution will be evaluated or judged as acceptable and adequate to the need.
4. Collect data.
5. Formulate and select the preferred solution or solutions. Test them in advance.
6. Put into effect the preferred solution.
    - *a.* Program the solution.
    - *b.* Control the activities in the program.
    - *c.* Evaluate the results and the process.

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[3] *Ibid.*, p. 241.

1. *Recognize, Define, and Limit the Problem*

Although this is the first formal step in the decision-making process, the preparation for making a particular decision began in the past of the decision-maker. In this step the problem becomes known, and the decision-maker goes through a process of defining and limiting the problem. He attempts to state the problem in terms of either his goals or the goals of the enterprise, and he also attempts to state the problem in such a way that he can grasp its significance.

Not all problems are problems to all people, and neither are problems of the same magnitude to all people. Some people feel that the ability to recognize problems is a characteristic of a good administrator. What is being said is that certain administrators have the ability to perceive more accurately and completely than do others and that this skill in perception helps their organization to be more successful. We have had good illustrations of this in many fields. The chairman of an eastern university department of education delighted in telling the story of his annual visits with the principal of a large urban high school. After a few opening remarks he would ask, "Well, what problems are you working on this year?" The answer invariably was, "We don't have any problems; we have answers!" It is interesting to note that, the year following the retirement of the principal, the high school was completely reorganized and its purpose changed drastically. The principal was able to screen out of his perceptual field all of the problems which threatened him.

It can be seen that a discussion of the recognition of problems is not a matter to dismiss lightly although it has received little attention in the administrative literature. Murphy states the dilemma in its full difficulty in this way:[4]

> There is a rather bewildering mass of evidence, both clinical and experimental, relating to the ability to shut out of a clear awareness those stimuli which threaten us; some of these studies seem to indicate that, as vague awareness of a situation tends to become

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[4] Gardner Murphy, "Knowns and Unknowns in the Dynamics of Social Perception," in M. A. Sherif and M. O. Wilson, eds., *Group Relations at the Crossroads* (New York, Harper, 1953), p. 148.

defined, we can arrest the process, so that sharp and explicit awareness does not follow; and perhaps that, after reaching this critical point and effecting this rejection, we actually demolish (repress?) what has begun to take place.

So we see that the administrator who gets an inkling of a situation which threatens his security *may* act to repress the perception and not see it at all. On the other hand, the administrator may perceive the problem, not be threatened, accept the situation, and act upon his perception. Some interesting research at the University of Kentucky points out that administrators who can do this have a personality structure which allows them to "accept their own worth and believe that other people are equally or more accepting of their worth."[5] These confident administrators are contrasted with another type, those who "accept themselves and believe that other people are less accepting of themselves."[6] The latter are the administrators who constantly change or screen their perceptions. The above research may account for the need felt by most corporations in trouble to change executives. The present executives have perhaps not perceived the "right" problems and so failed to change the course of action of the organization. New executives are more secure in that they cannot be blamed for the present mess, they can perceive the problems clearly and accurately, and they can act on the basis of their perceptions.

The ability to perceive problems is also related to knowledge of the area in which the problem is resident. For this reason it is not possible to develop skill in decision-making per se; rather, one must develop skill in making decisions concerning something in particular. Consider, for example, the airplane captain who has "lost" an engine 500 miles out of Gander on his way to Shannon. Should he continue, or should he turn back? In the first instance, some of the passengers will not even recognize the problem with its full ramifications. The captain's knowledge of his airplane, its load, the weather conditions at Gander, the probability of restarting the engine or the probability of keeping it feathered—all of this substantive knowledge helps the captain first to recognize the problem and then to define and limit the problem.

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[5] Robert L. Hopper and Robert E. Bills, "What's a Good Administrator Made Of?" *School Executive,* Vol. 74, No. 7 (March, 1955), p. 94.

[6] *Ibid.,* p. 94.

There is also a semantic dimension to this step. The way in which the decision-maker verbalizes the problem during the defining and limiting stage is of importance. If our captain verbalizes the lost engine as "a blazing fireball" or "an overheated cylinder," both he and his crew will be conditioned by the verbalization itself as to how they will react. The problem should be verbalized as accurately as possible, using words with the most appropriate referents.

Organizations are more and more building into themselves "scanning" devices which make it possible to perceive problems even before they occur. This practice ranges, for example, from the use of economic analysts to foretell the state of the economy to the employment of consulting psychologists to fathom the mental attitudes of employees before trouble breaks out. These reports are the stimuli fed into the decision process of an organization. One measure of the success of an organization is the extent to which the decision-makers perceive the "right" problems, define, and limit them.

2. *Analyze and Evaluate the Problem*

Once the problem is recognized, defined, and limited, there should follow an analysis and evaluation. Those within the organization pose such questions as: "What does the problem mean to me?" "What does the problem mean to the organization?" "What do I want to do about it?" "What do we want to do about it?"

It is at this point in the process that one considers, in addition to the above questions, what are called the occasions for decision-making. After a problem has been identified, the administrator needs to decide whether or not he should attempt to solve it. Because the administrator has many things to do, it is necessary for him to know when to make a decision and when not to make a decision. This calls for the ability to recognize such matters as the urgency of the situation, the origin of the problem, whether or not someone else could solve the problem better than he, and a host of other considerations. One of the most pertinent statements ever made in regard to this matter was made by Barnard. In succinct language he states:[7]

> The fine art of executive decision consists in not deciding questions that are not now pertinent, in not deciding prematurely, in not making decisions that cannot be made effective, and in not making decisions that others should make.

Barnard suggests the questions which each executive should ask himself before he makes a decision. If the answer to any of these questions indicates that someone else should make the decision, then the executive should let it go to another or make no decision at all.

Although Barnard intended that his admonitions be pointed at executives, his words hold true generally. As an example, the small group leader who makes a decision which cannot be carried out loses tremendously in status and prestige.

Barnard's statement indicates when not to make decisions, but what are the occasions for *making* decisions? He indicates that there are three:[8]

1. Authoritative communication from superiors
2. Cases referred for decisions by subordinates
3. Cases originating in the initiative of the executive concerned

For the sake of brevity these will be referred to as intermediary decisions, appellate decisions, and creative decisions, respectively. They are discussed in order of frequency and not necessarily in order of importance.

Intermediary decisions. This type of decision is a very common one in any type of organization. These decisions arise whenever orders, commands, or policies are handed down by superiors to subordinates. In the public schools, for instance, the superintendent of schools is the executive officer of the board of education. The board makes policy (often with the aid of the superintendent), and the superintendent is expected to administer the policy. He may do this by delegating the matter to one or more building principals, or he may handle the matter himself. In any event, the matter must be attended to and cannot fall under the several admonitions for not making a decision mentioned by Barnard.

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[7] Chester I. Barnard, *The Functions of the Executive* (Cambridge, Mass., Harvard University Press, 1938), p. 194.

[8] *Ibid.*, pp. 189-192.

Because of the position of the executive who must make intermediary decisions, many difficulties are often encountered. These have been very capably discussed in general by Roethlisberger,[9] but let us look at a specific case in which a superintendent must make an intermediary decision to note some of the difficulties involved:[10]

> One of our buildings had been declared unsafe for school use. A new building had been erected to take its place. Before sidewalks could be completed the rainy season set in. The board decided that since the old building had already been in use six months after it was declared unsafe it would not hurt to use it a few months longer and thus save the new building from damage from the mud.
>
> But the parents became anxious. They protested the delay in occupying the new building to me and to some of the faculty. They said, "We voted bonds for the new building because you declared the old one unsafe; why jeopardize the lives of the children any longer?" My reply was made too hurriedly and was prompted by a self-protective impulse. I said we only awaited the authorization of the board of education to move.
>
> I was properly reminded, when the time came, by one of the board members that I had been disloyal to the board. I had not backed up the policy the board had adopted for protecting the building by explaining the reason for the delay.

The most apparent point illustrated by the case is the "man-in-the-middle" nature of this sort of decision. In the case, the board had made an obviously unpopular, if not immoral, decision. The superintendent was expected to make the necessary administrative decision to implement the decision of the board. In the face of the angry parents he reneged and indicated that he was not a party to the act. One who must make intermediary decisions has a difficult role to play, but play it he must at the risk of losing his position.

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[9] Fritz J. Roethlisberger, "The Foreman: Master and Victim of Double Talk," *Harvard Business Review*, Vol. 23 (Spring, 1945), pp. 285-294.

[10] Ralph V. Hunkins, *Superintendent and School Board* (Lincoln, Nebr., University of Nebraska Press, 1949), pp. 75-76.

The making of intermediary decisions requires great human relations skill in that these decisions are essentially of an implementing nature and call for a change in behavior of the individuals who are affected. While this would seem to call for participation on the part of those involved, care must be taken to warn those involved that they are not really making the decision, that they are being conditioned to accept the decision since the administrator is putting into operation the decision of his superiors. This is the type of situation reported by Levine and Butler[11] and Lewin[12] in which a decision had been made and studies were carried out to determine how to get people to accept the decision. Analysis of their studies indicated that the best procedure found was to use small discussion groups under the guidance of a skilled discussion leader.

Appellate decisions. These decisions are referred to the administrator from his subordinates for a number of reasons. One category of appeals stems from incompetence, as, for example, when a staff member has been delegated the authority to make a decision and finds that he is incapable. A building principal finds that he cannot construct a class schedule (dependent upon a large number of decisions), or a plant manager cannot improve a production schedule. Another category of appeals is that which has its genesis in novel situations. Subordinates find that they cannot act under present policy because it does not cover the novel situation that has arisen. Another area of appeals has its roots in the incompetence of superiors. Communications containing decisions are not understood by the staff, and it becomes necessary to issue new instructions. The most common type of appellate decision is concerned with settling disputes between two or more subordinates. Disputes between line and staff officers, heads of two divisions, and the like illustrate this type of decision.

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[11] Jacob Levine and John Butler, "Lecture vs. Group Decision in Changing Behavior," *Journal of Applied Psychology*, Vol. 36, No. 1 (February, 1952).

[12] Kurt Lewin, "Studies in Group Decision," in Dorwin Cartwright and Alvin Zander, eds., *Group Dynamics* (Evanston, Ill., Row, Peterson, 1953), pp. 287-301.

The number of appellate decisions an executive is called upon to make is an indication of the state of health of an organization. A relatively small number would indicate that decisions were being made in accord with standard operating procedures, that competent personnel had been placed in key positions, and that interpersonal relations were smooth. Barnard summarizes this point:[13]

> The control of the number of appellate cases lies in adequacy of executive organization, of personnel, of previous decision; and the development of the processes of informal organization. The test of executive action is to make these decisions when they are important, or when they cannot be delegated reasonably, and to decline the others.

Creative decisions. While the two types of decisions discussed above originated outside the person of the administrator who ultimately made the decision, creative decisions originate within the person of the administrator. The key concept is that of *origination* and has led some to call these originative decisions. The creative decision-maker makes a decision which changes the direction of the activity of an organization. Other decisions are largely made within a framework of policy, but the creative decision breaks with established policy. This type of decision calls for new policy, for a change in the thinking and activity of the members of the organization, and often for a change in the organization itself—occasionally calling for the demise of the organization.

Because the creative decision is accompanied by much criticism on the part of those affected, it is the type of decision which is difficult to make and is relatively rare in comparison with other types of decisions. The making of creative decisions indicates dissatisfaction with the *status in quo*. Those affected tend to protect themselves, and the struggle is on. By their very nature, creative decisions are not easily made in groups and are almost invariably the product of an individual. It is also difficult to get acceptance through the group approach although this is the only way in which acceptance can be gained.

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[13] Barnard, *op. cit.*, p. 191.

Ability and desire to make creative decisions is the mark of a top executive. These decisions cannot be delegated, can only rarely be shared, but must be shouldered by the executive himself. He must work the decision through, even though there is certain to be opposition.

The analysis and evaluation of the problem are further contingent on how the administrator perceives the problem, both as an individual and as a member of the organization, and also on the nature of his organization's set of values. These factors give significance to the problem and determine the degree and nature of the action to be taken. It is at this stage, very often, that the "decision to make a decision" is made. If, in evaluating the situation, it is decided to go no further, then the decision to make no decision is made. In determining future action such a decision is as important as any other.

3. *Establish Criteria of Judgment*

At this point the concern is with the criteria by which the proposed solutions to the problem will be evaluated. This is a most crucial stage in the decision-making process because here is where the value system and the aspirations of the organization or individual are built into the process.

The administrator here asks the question, "How will I know if the solution I arrive at is a satisfactory one?" Unless he sets down some criteria by which he can judge solutions he will never know whether he has accomplished his goal or the goal of the organization. All administration is directed toward the achievement of certain goals. As an illustration of this point, consider the school system in a well-to-do community. It was the custom to administer standardized achievement tests each year to each child. Each year the school was able to report that its students averaged slightly above national norms. The community felt, however, that the students were not averaging high enough above the norms. In other words they set a criterion for evaluation *above* that of the school staff. The school and community then went to work to attain the higher goal.

Another example of setting criteria is the debate in the New York State Legislature on a bill which would prevent the Public

Service Commission from changing its base for computing profit for utility companies. The New York Telephone Company had applied for a $55,400,000 rate increase. This would have been a justifiable increase had the base on which rates are computed been changed from the amount of money originally invested in plant, less depreciation, to replacement value at the present time. In a sense, a decision on criteria and standards must be made prior to the major decision. This, again, indicates the sequential nature of the decision-making process.

The criteria of judgment have many sources, including the level of aspiration of the administrator or the members of the organization, the values of each, and the perception and motives of those involved.

4. *Collect Data*

At this step of the process data is collected on the basis of which the decision is to be made. A lengthy discussion of data gathering and data processing is not appropriate here; however, we do need to answer the question, "Collect data, yes, but what data?" More data than can be used is more often collected than not. Briefly, the data collected should be *relevant*, that is, either free from bias or with the bias clearly indicated and should be *repeatable,* that is, the same or unchanging data when used by others as when used by the decision-maker.

Collecting data is, at least in part, one of the reasons for the existence of the formal organization. It is profitable to think of organization in terms of the channels by which data flows into places in which decisions are made. A useful way of differentiating between line and staff is that line asks staff to produce data relevant to certain problems. This staff does, and then line makes decisions on the basis of the data provided. The interrelatedness of line and staff can be seen and the difference is also clear when approachd in this manner.

5. *Select Preferred Solution*

This is the step which is the point of decision. All that has gone on before culminates in a decision. Actually the step has three subsections. These are: (1) the formulation of several solutions or decisions, (2) weighing the consequences of each solution (assigning probabilities), and (3) the selection of a single solution as the most likely to succeed.

The formulation of multiple solutions calls for the use of inventiveness in that all possible solutions will be considered. This is probably an excellent place for groups (for example, committees) to be used in formulating decisions. Although the literature of decisioning is quite clear on the point that individuals make better decisions than groups,[14] it is entirely reasonable that a wider range of possible solutions could come from the use of groups. The groups should not be required to solve the problem or settle on a single solution, but they could be asked to present possible solutions. The administrator should also consult with individuals within and without the organization to broaden the scope of possible solutions. He should keep in mind that prominent among these possible solutions is the decision to do nothing because it is as much of a decision as is any other.

At this phase of the process there also occurs a weighing of the consequences of each solution. The decision-maker says, "If I do this, then this will happen." These consequences are predicted on the basis of what he knows of the probabilities of success of each solution. Some of these probabilities can be stated mathematically, but more often they must be approximated as no definitive probabilities can be determined. This is certainly true in school administration where the superintendent can only approximate in a very rough way the probable success of a chosen path of action.

The accompanying diagram is called a *probability event chain* as it depicts the probability of the consequences attending each of two possible actions.[15] It should be read as follows: X is a decision to be made; A_1 and A_2 are possible courses of action.

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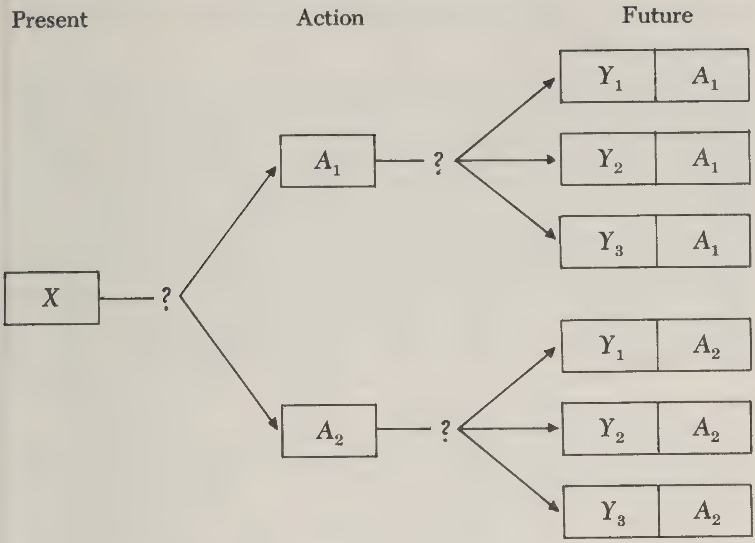
[14] For example, see Donald W. Taylor, Paul C. Berry, and Clifford H. Black, "Does Group Participation When Using Brainstorming Facilitate or Inhibit Creative Thinking?" *Administrative Science Quarterly*, Vol. 3, No. 1 (June, 1958), pp. 23-47.

[15] Irwin D. J. Bross, *Design for Decision* (New York, Macmillan, 1953), p. 25.



If one follows course of action A_1, consequences $Y_1|A_1$, $Y_2|A_1$, or $Y_3|A_1$ may eventuate. If one follows course of action A_2, consequences $Y_1|A_2$, $Y_2|A_2$, or $Y_3|A_2$ may eventuate. Probabilities of each consequence are approximated together with the desirability of the consequences, and from this either A_1 or A_2 is determined to be the course of action (decision) to follow.

The third phase calls for the selection of *one* solution. Just how one solution is arrived at as *the* solution is not clear. It should be obvious, though, that subdecisions have been made in each of the preceding steps, and these circumscribe the nature of the solution to be selected and tested. In other words, the preferred solution is not likely to be a bolt out of the blue; it is more likely to be a sequential outgrowth of other decisions made earlier in the process. Penelope Mortimer says this so well when speaking of her two leading characters in *The Bright Prison.*[16] They were people "who did things not because they were right or wrong, pleasant or unpleasant, but because there was no alternative."

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[16] Penelope Mortimer, *The Bright Prison* (New York, Harcourt, Brace, 1957).

Although there has been much speculation as to why one decision is made rather than others, much work needs to be done in this area. However, one nonstatistical approach is presented here. This approach is based upon the concept of *valence* and has been used primarily by field psychologists to explain decisions.[17] The valence concept as the basis for a theory of decision-making has been developed by Cartwright and Festinger[18] and recently elaborated on by Gyr.[19] The basic model developed by Gyr describes the relationships among force, valence, and potency and is expressed by the formula:

$f_{PG} = (V_aG)\ (P_oS)$ where:

f_{PG} is the force (f) on the person (P) toward the goal (G)

V_aG is the valence of G

P_oS is the potency of the situations

This expresses a single situation with one valence. A more common situation with two valences is represented by:

$f_{PG} = (V_aR)\ (P_oS_R) + (V_aC)\ (P_oS_C)\ (P_oS_R)$ where:

V_aR is the valence of the goal to be "right"

V_aC is the valence of the goal to "cooperate"

P_oS_R is the potency of the situation in relation to the goal to be "right"

P_oS_C is the potency of the situation in relation to the goal to "cooperate"

Gyr found he was able to predict decisions with a frequency far better than chance, but found that assigned probabilities needed revision and that there was difficulty in measurement.

We can well understand the decision made through a succession of steps as described above, because we have seen the unfolding of the decision through many smaller ones. What is difficult to understand is the maverick decision, that is, one which appears to break the sequence. By way of illustration, there is the story of the executive who was selecting a new secretary. He interviewed three applicants in the presence of a friend. Aside from the usual questions he asked each, "What is 2 and 2?" The first replied, "4," the second, "22," and the third said, "Either 4 or 22." The executive then explained to his friend that the first girl was rather rigid and would work according to rules; the second was creative; the third was very flexible and could see many points of view. "Well," said the friend, "I suppose you will hire the third?" "Oh no," said the executive, "I'll hire the first—she had the biggest eyes!"

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[17] For an elementary description of valence and its application to choice see Griffiths, *op. cit.*, pp. 30-44.

[18] Dorwin Cartwright and L. Festinger, "Quantitative Theory of Decisions," *Psychological Review*, Vol. 50 (November, 1943), pp. 595-621.

[19] J. W. Gyr, "A Theory of Interpersonal Decision," *Dissertation Abstracts*, Vol. 13 (1952), pp. 895-896.

While these maverick decisions are interesting, they are relatively rare in organization. Once the problem is defined and analyzed, and data collection is in progress, the direction of the major decision has been set by the multitude of minor decisions made along the way. That is why a major policy decision of the President of the United States generally comes as no surprise to the corps of Washington reporters who have been observing the decision process over a period of time. They can also "call the turn" by observing the crucial minor decisions made by certain officials at different phases of the sequence.

6. *Put Solution Into Effect*

This is the last step in the decision-making process, and it involves both implementing the decision and modifying it in terms of conditions which occur as the decision becomes operational (known as feedback). Even though a major decision is to be put into effect it does not mean that the decision-making process ceases. In the implementation there are numerous minor decisions which need to be made. This further emphasizes the sequential nature of the decision process.

Putting the solution into effect may be discussed as having three phases: *(a)* programming, *(b)* control, and *(c)* evaluation.

Programming is the procedure used to create or utilize the structure necessary to do what the decision calls for. There are times when it is necessary to build a new structure, other times when the existing structure may be used, and still other times when any of the degrees of action between these two extremes may be required. Hemphill's discussion of this point is most helpful. He first discusses the concept of *interaction* which is introduced by the concept of *acting*: "A single individual is said to be acting when he engages in *operations* monitored by reference to intention."[20] Then he states: "But if his (the actor's) intentions depend upon the action or expectations of the action of another, and vice versa, the two individuals are in interaction."[21] Interaction is very similar to the concept of transaction discussed above. Hemphill is then ready to move into his most important concept, that of *structure-in-interaction,* which is defined as: "a consistency in behavior occurring during interaction that permits the prediction of the behavior that will occur in future interaction."[22]

Once a decision has been made and is to be put into effect, a structure is created in the organization which makes possible the prediction of future interaction as regards the decision. This structure may vary from taking care of a single event to setting a routine by which all future events of the same type will be handled. As an example of the latter, a principal new to a school might instruct his secretary to establish a special file for all letters coming from the superintendent. He might also instruct her to call his attention to all letters from the superintendent immediately upon their arrival. He has then established an expectation of how the secretary is to act when she sees letters from the superintendent. The first phase of putting the solution into effect is the programming of the decision.

Control is the process of assuring that performance corresponds with plans. All decision-makers operate within a set of limits. Sometimes the limits are broad—as with the President of the United States, sometimes extremely narrow—as with a young child, but regardless of the position or status of the decision-maker, there are limits. The chief purpose of setting limitations on decision-making power is to improve the caliber of decisions made. When limitations are set up, ways and means of making decisions, as well as the content of the decisions, are prescribed. The usual way of doing this in an organization is through the setting of policy. An effective set of policies should indicate *who* is to make a decision, *what* the decision is to be concerned with, and some information as to *how* the decision is to be made. Members of an organization should have the security which well-written policy affords them. One of the chief causes of confusion in the network of human relationships in an organization is the lack of clear policy.

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[20] Hemphill, *op. cit.*, p. 96.
[21] *Ibid.*, p. 96.
[22] *Ibid.*, p. 96.

For purposes of discussion, six limits on decision-making are presented: definition of purpose, criterion of rationality, conditions of employment, lines of formal authority, relevant information provided, and time limits.[23]

The first limit on decision-making power is the definition of the purpose of an organization. When the purpose is set forth clearly, the members of an organization are prevented from making certain decisions and are channeled toward making certain other decisions. Definition of purpose is not easy, as is demonstrated by an examination of any organization in actual operation. Consider this case:[24]

> A midwestern firm has always specialized in the manufacture of the founder's basic invention. It has always conceived of its business as doing the best it could with that one product. Changing conditions now force it to consider merging with another company making a related but quite different product. By merging it can make more money—but management will have to divide its attention among several different lines of manufacture. Does its strength lie in manufacturing one kind of product—or what? Will its business security be enhanced by merger? Is a larger return on its investment a true measure of its business success?

The definition of the purpose of the organization is a function for top management to perform. Only top management has the information and understanding which are necessary for making this judgment. The clarification of the purpose provides a definite limit on the decisions made within the organization.

[23] Adapted from Robert Tannenbaum, "Managerial Decision-making," *Journal of Business*, Vol. 23, No. 1 (January, 1950), pp. 33-37.

[24] Bruce Payne, "Steps in Long-Range Planning," *Harvard Business Review*, Vol. 35, No. 2 (March-April, 1957), pp. 99-100.

As Simon has pointed out,[25] "The individual can be rational in terms of the organization's goals only to the extent that he is *able* to pursue a particular course of action, he has a correct conception of the *goal* of the action, and he is correctly *informed* about the conditions surrounding his action." Many procedures are used to insure the rationality of the actions of members of an organization. Attempts are made to select individuals who have an inclination to accept the goals of the enterprise; they are submitted to an intensive program of indoctrination (commonly called orientation); they participate in continuing programs of indoctrination over long periods of time (commonly called in-service education); they perform according to standard operating procedures or written rules and regulations or teachers' handbooks, whatever the organization may be. At the same time, the organization man's wife has undergone a similar program of selection and indoctrination. Modern organizations leave little to chance in insuring that decisions made by subordinates are made in conformity with the goals of the organization.

A very simple illustration will show how the establishment of a criterion of rationality facilitates the handling of a certain type of decision. The following is an excerpt from the *East Greenbush Central School Teachers' Handbook:*

> "All students who become ill during school hours should be referred to the nurse who will make the decision regarding disposition of the case. No child should ever be excused to go home due to illness until he has been seen by the nurse. Parents must be contacted and transportation provided."

This regulation illustrates the point that no chances are taken in deciding who will make the decision, the subject on which he will make it, and the way he will make it. Teachers and principals work within a single frame of reference. Although individuals are restricted in the areas in which they can make decisions, there is a strong tendency to increase the rationality of behavior of the individuals.

When an individual is employed by an organization, he is employed for a particular position. In effect, the conditions of employment are a limitation upon the decisions which he can make. The foreman of the crankshaft department, for instance, is not expected to make decisions about the internal operation of the assembly department.

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[25] Simon, *op. cit.*, p. 241.

By establishing lines of formal authority and having them clearly understood by all, the administration insures that each individual knows who will make those decisions that will affect him directly. This prevents problems which arise when individuals are accountable to more than one person, when lines are not clear, and when several people believe themselves responsible for a single area.

The providing of relevant information can be looked upon in three different ways. First, if the administration wants to involve others in the decision-making process, it can aid good decisions by providing a wealth of information. It can send bulletins, hold meetings at which relevant data are presented and discussed, and make announcements. It can make certain that the members of the staff get pertinent information, get it first—ahead of outsiders, and get it in a manner which shows that the administration is pleased that they do get it.

Second, the opposite result can ensue if the administration withholds information. It is sometimes the practice for administrators to keep all relevant information to themselves and still expect that there will be willing participation in decision-making. A group from whom information has been withheld will not only not participate but will resent being asked to.

Third, administrators who wish to give the appearance of cooperating with their staffs, of being democratic, yet who do not believe that a decision arrived at with the full participation of the staff is a better one than that arrived at by the administrator alone, use still another method. They dole out bits of information and in this way manipulate the group, as indicated by the following case:[26]

> In an elementary school building the faculty had been vitally concerned with the problem of noon hour supervision. After a month of controversy the faculty seemed to have arrived at a decision concerning rotation of playground supervisors. This decision was one

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[26] Griffiths, *op. cit.*, p. 215.

in which the principal had little faith and it was obvious that he opposed it. The faculty appeared as though it would support the decision regardless of the principal's views. On the morning prior to the faculty meeting which would decide this issue each teacher received a notice which read: "In view of the fact that the Central Office will shortly consider the problem of noon hour supervision on a system-wide basis I believe it would be wise to drop all consideration of the matter," signed by the principal.

Needless to say, the dropping of this information at this strategic time stopped the faculty from further discussion of the issue. It can be concluded that the free flow of information of concern to the members of the organization increases the rationality of the decisions which are made. The decision-making ability of the members of the organization is abridged when no information is forthcoming or when the information is distributed in a manipulatory manner.

Setting a time limit is a method of forcing action on the part of subordinates. It is particularly effective when used with individuals who are not sufficiently self-motivated to act on a particular issue. They may lack motivation for at least two reasons: having a strong interest in another area which precludes interest in the area under consideration, and never having had the opportunity to make a decision and so tending to dally under new freedom. When the authority to make a decision is delegated, there should always be a time limit indicated. This, of course, should not be of such short duration that it will result in a shoddy job.

Evaluation is the final phase of putting the decision into effect. It serves the purpose of determining whether the decision was the most desirable which could have been made, whether the decision has been implemented so that the intent of the decision has been realized, and what changes in implementation are necessary to accomplish the outcomes desired.

SUMMARY

This final chapter presents a view of the central process of administration, that of decision-making. The conventional model is used, but with the introduction of the concepts developed in

Chapter 4. The decision made is composed of the following aspects:

1. Recognize, define, and limit the problem.
2. Analyze and evaluate the problem.
3. Establish criteria or standards by which solution will be evaluated or judged as acceptable and adequate to the need.
4. Collect data.
5. Formulate and select the preferred solution or solutions. Test them in advance.
6. Put into effect the preferred solution.
    - *a.* Program the solution.
    - *b.* Control the activities in the program.
    - *c.* Evaluate the results and the process.

It is emphasized that decisioning in an organization is not a personal matter, and the effectiveness of decisions is not a product of the quality of decisions of any one person. The decision process is an organizational matter, and the criterion by which an organization may be evaluated is the quality of the decisions which the organization makes plus the efficiency with which the organization puts the decisions into effect.

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